Crisis Management in Russia: Overcoming Institutional Rigidity and Resource Constraints

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Title:	Crisis Management in Russia: Overcoming Institutional Rigidity and Resource Constraints
ISBN:	91-87136-93-7
ISSN:	1650-3856
Cover design:	Leif Arback
Printer:	Elanders Gotab, Stockholm 2002
Number of copies:	500 ex.

Table of Contents

Acknowledgements

The editors would like to express their gratitude to a number of persons and institutions for making this book on Russian crisis management possible. We are grateful for the generous financial support from the Swedish Agency for Civil Emergency Planning (ÖCB) which has made the CM Europe program (of which this volume is a part) possible. Special thanks to Sture Ericson, Bo Richard Lundgren, and Harald Törner of ÖCB for their help in launching this endeavor and bringing it to fruition.

We wish to thank the contributing authors, who have taught us much about life and politics in Russia and its proud research tradition. They have enriched our work with their constructive dialogue. Alla Mozgovaia deserves special mentioning for providing organizational support for the Russian research team from the Institute of Sociology at the Russian Academy of Sciences and for arranging a project workshop in Moscow in the spring of 2000. In addition, Boris Porfiriev would like to thank the Foundation for National Science Support in Russia for supporting his research.

A very special thanks to EMERCOM and to the Russian Minister of Emergency Management (Serguei Shoigu) who provided facilities for meetings and workshops among the authors and also supported the research in various ways. The Swedish Institute of International Affairs in Stockholm served as the home base for much of this project and provided a congenial working environment. The editing was completed at the National Center for Crisis Management Research and Training (CRiSMART) at the Swedish National Defense College. Many of our CRiSMART colleagues provided valuable input as discussants and resource persons during the course of the study. Professor Bengt Sundelius and Dr. Eric Stern, in particular, provided constructive criticism as well as useful insight. Daniel Nohrstedt co-authored one of the case studies. Last but not least, we would like to express our gratitude to Stephanie Young, who copy edited the entire volume.

Boris Porfiriev and Lina Svedin

Foreword

Progress in science and technology has significantly increased the economic and intellectual potential both in qualitative and quantitative terms. This progress has facilitated in solving many complex issues regarding global, regional and national development. Unfortunately, this progress has also had negative consequences.

The history of the last century can attest to this fact. Rapid industrialization, urbanization and the boom in information technology were escorted by an increasing number of natural and technological disasters, environmental degradation and escalating sociopolitical conflicts (terrorism, regional armed conflicts and so forth). Therefore, the world community considers sustainable development to be the cornerstone of long-term economic, social and political development. The concept and principles of sustainable development involve meeting the needs of the existing generation without threatening those of the future generation.

Russia strives to follow this ideology by reducing the risk of major accidents and catastrophes (by alleviating damage potentially or actually incurred by natural or technological disasters) and making this a key priority in national security. For the first time in national history, Russia in the last decade established a unified and comprehensive organization for preventing and responding to civil crises. The Unified State System for Emergency Prevention and Elimination (USEPE) was officially established in 1994. Due to the fact that it was built upon the previously existing civil defense institutional structure, USEPE is coordinated by the Ministry for Civil Defense, Emergencies and Natural Disasters Response (EMERCOM). This national system consists of various human, institutional, manpower, material, technical and R&D resources; all of which are needed for successful disaster management.

As a result, the ability to confront different kinds of emergencies has become a fundamental part of Russia's policy on national security. Legislative and normative bases have been developed. More efficient institutional management structures and teams of well-trained disaster analysts and practitioners have been organized. Modern search and rescue technologies have been introduced in the field. All of these changes have facilitated in qualitatively upgrading disaster prevention and crisis mitigation activities. The increase in

recent years of successful rescue and humanitarian operations confirm the achievements made in this area. Of course, not all efforts have been triumphantly implemented. EMERCOM is not a static organization and it continually works hard on ways to improve USEPE. This policy implies an ongoing process of developing and introducing the latest technology and new programs for increasing resistance to multiple threats.

The key in such a policy is international cooperation, which includes extensive investment in R&D in disaster prevention and crisis management. This volume on the Russian experience is one good example of such collaboration. The bulk of studies have been written by well-known Russian scholars with active support from the Swedish Agency for Civil Emergency Planning (ÖCB) under the umbrella of the Council of the Baltic Sea States (CBSS). Furthermore, the Center for Crisis Management Research and Training (CRiSMART) has directly been involved in the creation and the publication of this volume. Such efforts are extremely important for a number of reasons.

Firstly, this book is Russia's contribution to the international efforts on European crisis management. The newly-established collaboration between EMERCOM and ÖCB will most likely be a crucial element in future European efforts against natural and technological hazards. The fact that Sweden has held the EU Presidency this year adds to the importance of this cooperation. It provides a good opportunity for strengthening relations and for extending them beyond the Baltic Sea region over into the European continent.

Secondly, this book introduces European and other foreign readers to scholars from the Russian Academy of Sciences (primarily risk and disaster sociologists and researchers from EMERCOM). Their fruitful cooperation helped to facilitate a multifaceted and systematic analysis of the basic features of USEPE. This analysis focuses on risk assessment, disaster forecasting, and the organizational and social issues of responding to and recovering from a crisis. The Neftegorsk earthquake and the Chernobyl accident serve as example cases of major natural and technological disasters. This volume also explores in detail the perception and interpretation of different types of crises by the Russian mass media (mainly in the national newspapers and in a few professional journals). The mass

media is increasingly becoming a vocal observer and a significant actor in crisis management.

Regrettably, the authors have been unable to scrutinize every aspect of Russian crisis management. For example, the issues of emergency education and training are not considered in this book. Likewise, other matters are only partially considered.

This collection of Russian case studies in crisis management will be warmly received by international readers serious about disaster mitigation, crisis management and crisis response both in Russia and in Europe as a whole. I commend the initiative of the Swedish crisis research community for starting and nurturing this series on crisis management, which includes this volume on the Russian experience. I hope in turn that this Russian-Swedish initiative will help facilitate the implementation of Russian proposals to organize an international emergency management agency to coordinate civil protection efforts in Europe and in the world community.

Serguei K. Shoigu
Minister of EMERCOM

Chapter 1
Introduction[1]

Lina Svedin and Boris Porfiriev

The fall of the Berlin Wall and the quiet revolution of 1989 symbolize for many the radical transformation of the security complex, not only in Europe but in the rest of the world. For many of the former Soviet states (such as the three Baltic states), the end of the Cold War meant new freedoms. It meant the end of an era of imposition and the future was perceived as a clean slate for governments and policy makers to write upon according to their own preferences and new experiences.

For Russia, however, the end of the Cold War brought about a number of negative changes. For example, its territorial status has been challenged by secessionist movements. Yet some of the changes were more modest in comparison to some of the other Soviet republics. For instance, the Baltic states have experienced dramatic and rapid changes in their bureaucratic systems, whereas Russia has done so to a lesser extent. Since 1991 the personnel turnover in the politico-administrative bodies in Estonia, for example, has been close to one hundred percent. This trend has been less drastic in Latvia since it had stronger political ties to the Soviet Union than the other Baltic countries (see Stern and Hansen, 2000).

In addition to carrying a lot of political and institutional baggage from the Soviet era, Russia has experienced some reckless economic transitions. The institutional rigidity and the resource constraints of contemporary Russia in combination with the unique position Russia held as the center of the former Soviet empire have been significant factors. The dismantlement of the Soviet Union left Russia, like the other former Soviet states, in a position to redefine its own identity and its relations with other countries. Arguably, the incentive for change was not as strong in Russia as it was in the other former Soviet states, which considered themselves victims of Soviet imperialism. Today Russia faces the challenge of overcoming

[1] This chapter draws directly and expands upon the introduction found in *Crisis Management in a Transitional Society: The Latvian Experience* by Stern and Hansén (2000: 13–18).

these institutional and resource constraints and must also try to tackle a number of other complex problems. In some respects, this makes Russia one of the most interesting countries for studying the specifics of transitional crisis management and one of the potentially most valuable sources for extracting practical lessons.

The aim of this volume is to identify, describe and analyze some of the many challenges that Russia has faced since the dissolution of the Soviet Union. We have – in collaboration with a group of Russian scholars and practitioners – sought to provide an illustrative sample of the types of disruptive events (technological, natural and environmental disasters) and policy challenges taking place in Russia today. In doing so, we hope to generate insight not only into the dynamics of crisis development and crisis perception, but also into the particular constraints and opportunities facing a transitional state as it wrestles to manage crises.

CRiSMART and the CM Baltic/Europe Research Program[2]

Since 1997, the Swedish Center for Crisis Management Research and Training (CRiSMART) in collaboration with researchers in the Baltic Sea area have carried out over hundred case studies on crisis management. This book is one of six country-based volumes, within the CRiSMART series, focusing on national crisis management.[3] These case studies follow the CRiSMART methodology and a variety of crises in different policy sectors and in various countries are analyzed. In this volume we seek to examine how crises have been managed by the Russian government and Russian society over the past decade.

[2] The CM Baltic research program was originally established in 1997. As of July 2000, it became known as the CM Europe program. Therefore all reports prior to July 2000 are thus cited as CM Baltic/Europe reports, and those after July 2000 as CM Europe reports.

[3] The first two volumes (Sundelius, Stern, with Bynander, 1997; Stern and Bynander, 1998) focused primarily on Swedish crisis experiences. Volumes 3 and 12 explored crisis management in Estonia and Latvia, respectively (see Stern and Nohrstedt, 1999; Stern and Hansén, 2000). Country volumes focusing on Lithuania, Poland and Slovenia are currently in progress.

Method[4]

In this volume, the analytical approach developed in Sundelius, Stern and Bynander (1997) and used in the research program *CM Baltic/Europe Research Program: National Crisis Management in an International Perspective* (e.g. Stern and Bynander, 1998; Stern, 1999) is applied. This methodology entails:

a) A detailed reconstruction of the crisis events using the available government documents and reports, mass media sources (broadcast and print), scholarly investigations, and interviews with the involved decision-makers, stakeholders and citizens.

b) A dissection of the case into a series of crucial decision-making occasions (a series of "what do we do now?" problems which arise throughout a crisis) which challenge the coping capacity of the decision-makers. The selection criteria for identifying these decision-making occasions include:

- the problems/dilemmas which most occupy the decision-makers, issues which in retrospect had the potential to change the course of the crisis development, and
- those lessons learned with particular pedagogical value – those which highlight the best or worst practices.

c) Thematic analyses of phenomena pertinent to crisis management (see the following sections on analytical themes and propositions).

d) Comparing and contrasting case findings with others documented in the CRiSMART case bank and in the international literature. Also the Russian cases are compared with each other in order to explore the national crisis management style of the country (cf. Sundelius, Stern and Bynander, 1997; Stern and Nohrstedt, 1999; Stern and Hansén, 2000).

In addition, the Russian findings will be put side by side with those from other transitional societies in Europe in order to further illuminate the special crisis management dilemmas of these new democracies. There is a rich source of literature on transitional states (e.g. Elster, 1993; Lawson, 1993; Pridham and Vanhanen, 1994; Elster, Offe, and Preuss, 1998; Miller, White and Heywood,

[4] This section borrows from Stern and Hansén (2000: 8–9).

1998; Braun and Barany, 1999; Voskressenski, Porfiriev and Columbus, 1999; Kopstein and Reilly, 2000) which focuses more on the processes and less on the structures and specific actors. The CRiSMART volumes on national crisis management complement the conventional literature with real life examples and analyses of the structures.

CM Baltic/Europe Analytical Themes[5]

As in the other country groups within the CM Baltic/Europe research program, the case authors in this volume have been asked to explore a number of themes when analyzing their empirical findings. The case studies focus to a greater or lesser extent on a number of these themes. These themes[6] are explored in the previous CRiSMART volumes focusing on crisis management in Estonia (Stern and Nohrstedt, 1999) and Latvia (Stern and Hansén, 2000). These themes are:

- Crisis Preparedness, Prevention, and Mitigation
- Leadership
- Decision Units
- Problem Perception and Framing
- Value Conflict
- Politico-Bureaucratic Cooperation and Conflict
- Crisis Communication and Media Relations
- Transnationalization and Internationalization
- Temporal Effects
- Learning

In this section, each of the themes will be presented in turn. Reference will be made to seminal and recent contributions to the literature for the theme in question.

[5] This section borrows from "CM Baltic/Europe Analytical Themes" in Stern and Hansén (2000: 9–13) and "Crisis Management Europe: An Integrated Regional Research and Training Program" by Stern and Sundelius (February 2002).

[6] This set of themes was first introduced in Sundelius, Stern and Bynander (1997: Chapter 6) and has been further developed in Stern and Bynander (1998), Stern and Nohrstedt (1999), and Stern and Hansén (2000).

PREPAREDNESS, PREVENTION, AND MITIGATION

This theme focuses on the extent to which crisis managers and their organizations are prepared to respond to extraordinary events. Have they experienced serious crises before? Have they cultivated an 'it could happen here' mentality and prepared themselves psychologically for the rigorous demands for crisis management? Are there structures and plans in place for crisis management and are these easily adapted to a variety of situations? Are decision-makers able to identify potential threats and quickly act to prevent them from escalating? Are windows of opportunity for limiting damage and containing the situation at a lower level in the crisis management structure exploited?[7]

LEADERSHIP

This theme focuses on leadership styles exhibited by key actors in the crisis. Leadership may be operative – in the sense of taking an active role in the decisions, executing practical crisis management activities, and coordinating these activities. Leadership may also be symbolic – in the sense that leading figures show, through word and actions, that they are participating in the crisis and are empathizing with those who are at risk or who are already victims of the crisis. Leadership may also be concrete and personal (focusing on individuals as active leaders), or more abstract and distant (as a 'parental' figure). In deliberations, leaders may take a directive/hierarchical or a facilitative/collegial approach. The act of exerting leadership should be seen as a relational activity that is inextricably linked to the people it is exerted over. Leadership is mediated by contextual factors such as power, affect, culture, organizational structure and access to expertise. Furthermore, leaders tend to vary in their propensities to micro-manage (maintain a high level of personal control) or delegate (allowing others to assume control) when it comes to critical decisions (see e.g. Bass, 1997; Gardner, 1995; Hermann and Hagen, 1998).

[7] For more information on crisis prevention and mitigation, see e.g. Ender and Kim (1988), Waugh (1988), and Lund (1996). For more skeptical examinations of the potential for risk elimination and accident prevention, see Wildavsky (1988) and Perrow (1999).

DECISION UNITS

This theme focuses on the questions of how and where decisions are made in the type of complex institutional systems which are typically engaged in managing a crisis. For example, crucial decisions may be taken by a variety of decision-making groups consisting of just one individual, tandems or dyads, small groups or whole organizational networks. Similarly, decision units are located in different political/administrative (or corporate) systems and play different roles within those systems. Decision units may be strategic or operative in nature and may be located at the local, regional, national or the international level (e.g. in the EU or the UN). Decision units may also vary considerably during a given crisis in terms of their composition, mode of operation and placement; it is not uncommon that the decision-making authority is shifted either upward (up-scaling) or downward (down-scaling) in the multifaceted politico-administrative escalation and de-escalation processes (see e.g. Snyder, Bruck, and Sapin, 1963; Hermann, Hermann, and Hagen, 1987; Rosenthal, Hart, and Kouzmin, 1991; Stern, 1999). As a consequence there are a number of more or less explicit criteria for determining which individuals and organizations will be included in (or excluded from) the decision-making 'loop' during a crisis.

PROBLEM PERCEPTION AND FRAMING

This theme focuses on the subjective and socially constructed aspects of crisis decision-making. Crisis decision-makers do not act upon the uncontestable and objective picture of the situation but rather they make decisions based on their perceptions and interpretations of what is happening (Snyder, Bruck and Sapin, 1963; Sylvan and Voss, 1998; Stern, 1999). While problem framing often takes place at a semi-conscious, intuitive level (especially by 'naive' decision-makers), problem-framing processes exert a profound influence upon choices. In other words, when the problem has already been identified and framed, many possible alternative prospects and lines of action have already been discarded and strong propensities and constraints upon action created. Framing is heavily influenced by cognitive processes such as (historical) analogical and metaphoric reasoning, and social structures like culture, information flow and the organizational context (Vertzberger, 1990; Larson, 1985; Khong, 1992). There are im-

portant questions to ask. Why do particular actors perceive and frame problems the way they do at various junctures of a crisis? What makes these problem images shift (or remain stable) over the course of a crisis and the aftermath of a crisis?

VALUE CONFLICT

This theme focuses on the potential tension and conflict among the various values at stake in a crisis situation. An integral part of problem framing is identifying the values perceived to be at stake in a given situation. Identifying the values implicated is often a demanding analytical task and it is common for decision-makers to overlook values embedded in a complex issue, if they do not engage in rigorous critical deliberations (see e.g. Steinbruner, 1974:16–17; Keeney, 1992). Crises, by definition, have profound implications for fundamental values such as preservation of human life, sovereignty/autonomy, economic well being, democracy, rule of law, and so forth. More parochial values – such as the personal and political fortunes of individual officials and decision-makers – are also involved. Good crisis performances make careers – poor ones have the potential to break them. It is common for multiple and competing values and priorities to be at stake in crises and thus decision makers often face painful and stress-inducing dilemmas and tragic choices (Janis and Mann, 1977). Decisions-makers may ignore or deny value conflicts (to avoid stress), which tends to generate unbalanced policy-making. Decision-makers may recognize and accept value conflict – following Lenin's dictum that "You can't make an omelet without breaking eggs," some different coping strategies are available to them. They may choose to procrastinate and hope for the situation to improve. Alternatively, they may actively seek to resolve the conflict and find a transcendent solution which adequately protects the key values at stake.[8] It is interesting to see how these dynamics influence a specific crisis. That is, how do different crisis actors cope with the real and tangible value conflicts which tend to emerge in crisis situations?

[8] For more about value conflict, see George (1980) and Farnham (1998:26–39).

POLITICAL AND BUREAUCRATIC COOPERATION AND CONFLICT

This theme focuses on the issue of patterns of convergence and divergence, parochialism and solidarity – among the actors and stakeholders engaged in a crisis. There are a number of well documented dynamics which tend to create and exert certain pressures upon cooperation and solidarity in a crisis (e.g. the 'rally around the flag' effect, leader attentiveness, and 'groupthink').[9] However, there are also a number of countervailing tendencies. Crises often present particularistic risks which may induce political or bureaucratic actors to engage in defensive behaviors, which in turn may antagonize other actors and lead to conflict. For example, following failures or setbacks, it is common for actors to play a 'blame game.' Equally important is the fact that crises present opportunities as well as risks and therefore actors may end up competing for credit for the outcome of events (and denigrating the contribution of others). Finally, situational and contextual factors tend to be moderated by the nature of personal relationships within policy communities and by the strength of national cultural norms opposing opportunism in extraordinary situations (see e.g. Rosenthal, Hart, and Kouzmin, 1991; Stern and Verbeek, 1998; Allison and Zelikow, 1999).

CRISIS COMMUNICATION AND CREDIBILITY

This theme focuses on the relationship between crisis managers, the media, and the elite/mass public (see e.g. Nohrstedt and Tassew, 1993; Nordlund, 1994; Pearce, 1995; Regester and Larkin, 1998; Henry, 2000). In democratic polities, maintaining credibility and legitimacy in the media and in the eyes of the public is an essential task of successful leadership and governance in crises as well as in more 'normal' situations. Crisis managers enter crises with varying degrees of credibility; credibility which they may gain or lose over the course of the crisis. Actors vary considerably in their approach to crisis communication, which is a key component in establishing and maintaining credibility. Some take a defensive/closed stance, which can easily antagonize the media and cost a decision-maker

[9] See for example Rosati (1981) and Janis (1982).

credibility. Others take a more proactive/open stance and seek to maintain the initiative in providing information and in establishing friendly relations with the mass media. Actors also vary considerably in the ways and the degree to which they coordinate crisis communication, their choice of information strategies, and the information channels they use. Similarly, some actors closely monitor how their messages are being received and act upon this feedback in order counteract any perceived problems. Others focus heavily upon other aspects of the crisis management effort and are distracted by stress unaware of the growing credibility problems. There are a number of recurring credibility 'traps' – which involve creating gaps between words and deeds, expectations and performance – which can cost crisis managers dearly. Neglecting the symbolic aspects of crisis management is another important aspect of crisis communication that can cost politically (Stern, 1999: 201–202; see also Hansén and Stern, 2001).

TRANSNATIONALIZATION AND INTERNATIONALIZATION

This theme focuses on the tendency of crises to spill over national boundaries in an increasingly politically, economically, socially and not least ecologically interdependent Europe. While some crisis-generation factors may arise within a single country, many actual and potential threats do not respect national borders (social or geographical). Infectious diseases, natural and technical disasters, financial turbulence, and terrorism are just a few examples of such threats. Similarly, coping with contemporary crises often require transnational and international collaboration in order to deal with these cross-border threats (Buzan, 1991; Hart, Stern, and Sundelius, 1998; Buzan, Waever, and De Wilde, 1998; Steinbruner, 2000). Such cooperation may be either ad hoc or institutionalized, bilateral or multilateral. At the same time, the international arena can also be a source for rallying support for new policies.

TEMPORAL EFFECTS

This theme focuses upon sequencing and synchronicity – temporal effects that may have profound effects on crisis management. Se-

quencing refers to the path-dependent nature of crisis decision-making. Choices made early on in crises tend to constrain the possibilities available for later action and steer the crisis management along a particular trajectory, which may be difficult to change (see e.g. Levy, 1991; Sundelius, Stern and Bynander, 1997; Billings and Hermann, 1998). Often feedback, especially negative feedback, from early decisions will require further decisions – which together form a sequence. Synchronicity refers to the tendency of simultaneous events to influence each other via psychological and organizational mechanisms, such as availability, opportunity cost, cumulative stress, and distraction (Snyder, Bruck and Sapin, 1963; Haney, 1997; Stern, 1999). Synchronicity may appear within a single crisis (when multiple problems must be solved at the same time), between two simultaneous crises (as in the cases of Hungary/Suez in 1956, and Watergate/War in the Middle East in 1973), or between a crisis and other highly prioritized coincident activities such as elections, state visits, crucial legislative negotiations, and so on.

LEARNING

This theme focuses upon the extent to which actors are capable of analyzing their experiences and using the results as basis for change. As noted above in the discussion of problem framing, actors may attempt to use 'lessons' from past experiences (encoded as historical analogies or as experientially-based 'rules of thumb' as a guide for current action). Similarly, actors may respond to positive or negative feedback regarding their performance during a crisis by drawing lessons and by modifying their beliefs and practices. Actors commonly attempt to reflect upon crisis experiences after the fact, draw lessons for the future, and develop reform projects on the basis of interpretations of crisis experiences. Crises present considerable opportunities for learning, but post-crisis learning attempts are often distorted or derailed by a variety of typical social and psychological dynamics (see e.g. Lebow, 1981; Levy, 1994; Breslauer and Tetlock, 1991; Lagadec, 1997; Stern, 1997b).

On the basis of the findings from the thematic analysis of crisis management in Latvia, Estonia and tentatively from Poland, we revisit Stern and Hansén's propositions formulated regarding crisis management in transitional polities in order to advance these

thoughts. Some of Stern and Hansén's propositions have been restated, and others have been reformulated. Newly formulated hypotheses are developed in the following section of this chapter and they are empirically assessed in the final chapter of this volume.

Transitional Crisis Management: Developing Propositions[10]

The volume *Crisis Management in Estonia: Case Studies and Comparative Perspectives* (Stern and Nohrstedt, 1999) introduced the first in a series of comparative analyses of crisis management in transitional polities, by comparing and contrasting seven Estonian crises (and quasi-crises). The volume *Crisis Management in a Transitional Society: The Latvian Experience* continued this work by comparing and contrasting seven crises in Latvia. The Latvian volume took the comparative and theoretical ambitions a step further by formulating a set of propositions that enabled us to think about some possible patterns and particularities of crisis management in transitional societies in general and in Russia in particular.

This volume attempts to push this effort even further. It will compare and contrast four case studies of crisis management in Russia. This volume will revisit the initial propositions explored in the Latvian volume and it will attempt, through a series of steps, to move beyond these initial thoughts. In the concluding chapter of this volume these propositions will be critically examined in light of the Russian cases presented in this volume. Reformulations will be suggested for those propositions which do not seem to conform to the findings in this volume or support the previous hypotheses about crisis management in transitional countries. Some new ideas will also be introduced in the final chapter based on the Russian case findings.

The Institutional Erosion Hypothesis[11]

Proposition 1: As transitional societies move from one crisis management regime to another, the eroded institutional frameworks for

[10] This section builds upon "Transitional Crisis Management: Developing Propositions" in Stern and Hansén (2000: 13).
[11] The section builds in part upon the section "Crisis Development" in Stern and Hansen (2000: 14–15).

crisis mitigation and resilience are extremely strained. Thus civil society and public institutions become increasingly more vulnerable to unpredictable and negative events.

Earlier studies on crisis management in transitional states have led us to believe that as transitional societies move from one crisis prevention regime to another, both the frequency and severity of major negative events will tend to increase.

As Stern and Hansén point out in the Latvian volume on crisis management, all societies develop domestic regimes – institutional frameworks consisting of rules, norms, and decision-making procedures allocating responsibilities in a state's complex web of public and private actors (Krasner, 1983; Kegley, 1987). These regimes aim to prevent crises and cope with crises that cannot be prevented. Naturally, societies vary in the degree to which they emphasize prevention and resilience (Wildavsky, 1988; JCCM, 1996). These regimes are organized according to different principles and make use of alternative incentive structures, and monitoring and compliance mechanisms depending on the type of political system and cultural context in which the regime is embedded. Some societies, for example, are more willing to grant considerable powers of legal coercion to the Government (or the expert communities) whereas others rely on the discretion of individuals and the private sector to a greater extent. Furthermore some societies use regulation and governmental supervision to set mandatory safety standards, punishing noncompliance, while others rely on economic liability to hold negligent actors responsible for negative consequences and to motivate investments in safety. Crisis prevention regimes may also be affected by regional or global trends – such as the neo-liberal wave of financial deregulation which swept across North America, Western Europe, Australia and New Zealand in the 1980s.

This hypothesis expands upon the earlier proposition (Stern and Hansén, 2000; Nohrstedt and Stern, 1999) which states that as transitional states shift regimes a greater number of more severe crises tend to occur, due to the increased pressure on the eroding institutional framework. As a result of this decaying institutional framework, public institutions and the public are exposed to increased vulnerability to the negative impacts of crises. This suggests the increased likelihood of crises occurring as the system shifts from one regime to another and people are unsure of how the system

works. The strain on an eroding system can increase so much that a society slips into a perpetual crisis.

In the Latvian volume, three factors were discussed regarding why transitional regimes are likely to have difficulties preventing and mitigating crises. Firstly, the old mechanisms are dismantled before adequate new ones are in place and this creates vulnerability in the system (Elster, Offe and Preuss, 1998: 18–19 and 28–31). This transition period from the old to the new is critical and can require a lot of time. For example, newly deregulated financial markets often experience crashes and other forms of turbulence because direct control and regulations have been removed before the actors have learned to discipline themselves and/or before a new and adequate legal framework for ensuring this compliance has been put into place. This is further explored in the section called "The Under-Institutionalized Hypothesis" later in this chapter which discusses the third hypothesis.

Secondly, opportunities to mitigate developing crises are likely to be missed because of coordination and accountability problems among the various public (and private) sector actors. Ironically, crisis mitigation is likely to be hindered by both social loafing, where no actor is adequately engaged in dealing with the emerging problem (Latane, Williams and Harkins, 1979), and bureaupolitism in which multiple actors are engaged but are actively working against each other (Rosenthal, Hart, and Kouzmin, 1991). This issue is discussed more in depth in the section called "Bureau-Politics Hypothesis" later in this chapter which takes up the fifth proposition. Finally, the Latvian volume brought attention to the fact that transitional societies tend to experience severe resource constraints associated with profound socio-economic changes and economic restraints, which contribute to the erosion of critical infrastructure, and may lead to the deterioration of the environment and public health. These economic constraints, it was proposed, also make it more difficult to respond vigorously to warnings that a crisis may soon be, or is already, at hand. Furthermore a lack of means for coping with emerging problems make pathological crisis behavior (like denial or wishful thinking) among decision-makers more likely. The relationship between these factors and their impact on crisis management is discussed in the next section on institutional rigidity.

The Institutional Rigidity Hypothesis[12]

Proposition 2: In transitional polities the persistence of long existing institutional structures and institutions (at the meso- and micro-levels of society and government) result in a resistance to change to the basic foundations of the macro-political and macro-economic arenas. This precipitates crisis conditions and restricts the effectiveness of crisis policy. In addition, the policies and institutional practices of certain regional Western institutions (in particular, within the EU and NATO) are likely to create stress-inducing tension between domestic and Western norms and practices.

The underlying idea behind this hypothesis is the persistence of institutions and 'old' institutional practices in society and in government, particularly at the micro- and meso- levels, despite elements of change. This is an expansion upon the previous proposition in Stern and Hansén (2000)on stress-induced tension between domestic and Western norms.

One of the arguments in neo-liberalist thought is that we should set up good institutions to manage conflicts at the international level. Part of the underlying logic of the institutionalization argument is that once in place, institutions are hard to get rid of. These institutions are prevalent and widespread and this makes it difficult to dismantle them. One of the factors that influence the level of institutionalization in an organization is personnel turnover. Personnel turnover in the Russian politico-administrative bodies has not been as extreme as in the other transitional countries. With this in mind, we argue that a substantial part of the old ways of doing things still exists in the old and new Russian public institutions.

This residue has in turn a number of significant consequences for the discrepancy between society (as it evolves through the transition process) and the structures and practices of the politico-administrative bodies. The knowledge and methods of the organizations formed under the Soviet system are being preserved and employed since the same people more or less hold the same (or similar) positions within the bureaucracy. The organizations' collective memory is stored in its files, manuals and standard operating procedures. Until those change there is a substantial risk that these organiza-

[12] This section builds upon parts on the sections "European Integration and Domestic Political Conflict" in Stern and Hansen (2000: 16–17).

tions will run into a value conflict with the changing society. This could even imply dramatic attempts by the proponents of the old regime to challenge or destabilize the new regime in the crisis management structure. If these people have great personal values attached to a particular system or a certain way of doing things, the transition from one norm or value will be slower than if there is no strong identification.

The latter part of the hypothesis, reflects one of the more prominent findings in the Estonian volume. This finding suggests that preparations for European integration are likely to be troublesome for domestic policies, as was evident in the Kurdish refugee case (Kokk, 1999). Domestic norms and public opinion in transitional states regarding matters like the treatment of asylum seekers/ refugees, criminal punishment (especially capital punishment), and citizenship criteria have the potential to bud heads with West European norms (cf. Reinikainen, 1999; Kokk and Vaarik, forthcoming; Briede, 1998). EU and NATO expansion create strong incentives for candidate states to conform to these highly prioritized European norms on human rights and governmental practices (Braun, 1999: 17; Kovrig, 1999: 253–271; cf. Rubin, 1998: 171).

However, the two-level game (cf. Evans, Jacobson, and Putnam, 1993), which governments in some transitional states find themselves having to play, complicates management when many values are at stake. Their dilemma stems from the fact that reforms demanded by the states controlling access to NATO or to the EU may be quite unpopular at home. This seems to characterize transitional states (c.f. Arato, 1999: 242–243; Barany, 1999: 104–105) in general, and it is worth exploring how this pertains to Russia by including this dilemma in hypothesis number two.

The Under-Institutionalization Hypothesis[13]

Proposition 3: As transitional societies move towards a Western style democracy and market economy, there will be a struggle to overcome the existing under-institutionalization and there will be increased politicization and mediatization of crises and crisis policy.

[13] This section builds on the section "Politicization and Mediatization" in Stern and Hansen (2000: 15–16).

The CM Baltic/Europe project has a two-fold approach to the study of crisis management. The cognitive institutional approach emphasizes the subjective and constructed character of crises and takes into account the structures and institutions in which the management of these crises has developed. This hypothesis explores the relationship between cognitive factors (manifested in mediatization) and politicization (the institutional sides of crisis management).

From a psycho-political perspective, the impact of a negative event will depend largely upon how it is depicted and perceived. It is very clear that the media plays a key role in these processes (Edelman, 1988; Hermann, 1963). In many established democracies, the political role of the media has grown significantly in the last few decades (Rosenthal and Boin, 2001). Older, relatively deferential norms of political journalism (such as refraining from writing about the private lives of government officials) have given way to more sensationalistic, aggressive, and investigative journalism that is competing for news in an increasingly diverse, competitive, and globalized information market (Taylor, 1997). Likewise, the expectations on the public and political elites, regarding the Government's ability to prevent and cope with crises, seem to be increasing (Bovens and Hart, 1996; Blumer and Gurevitch, 1995).[14]

The volume on Estonian crisis management suggested that a similar, and in some respects even more dramatic, trend is taking place in transitional countries. In several respects, crisis management may have been easier for decision-makers during the Soviet era. In authoritarian systems political elites typically are accountable only to other elites and it is relatively easy to conceal shortcomings from the public and the docile state-controlled media. In the years following the dissolution of the Soviet Union and the subsequent independence of the Baltic states, crisis managers in these transitional states have increasingly been forced to face a more critical public, opportunistic opposition parties, and an increasingly resourceful and independent mass media. The Estonian case studies suggest that the new situation in the political and public arena demands much more of crisis communicators and requires a higher degree of coordination among the various crisis actors. It is justifi-

[14] A contributing factor may be overselling – to the extent that reform-oriented politicians promise too much in order to secure support for the transition process, there is a heightened risk of backlash when negative events occur.

able to suggest that the developments in the public arena, in general, and the growth of an independent media, in particular, have increased expectations on the Government to avoid and mitigate negative events such as accidents and natural disasters (cf. Bovens and Hart, 1996). While military training (and many other types of) accidents were common in the Soviet Union, it may be that citizens in the new democracies expect more from their 'new' and more Westernized governments.

Consequently, the hypothesis presented here suggests that the perception of a crisis is increasingly (but not irrevocably) shaped by the media and thus often becomes a political issue. It also implies that with more open and extensive media reporting (and with real or imagined shifts in the crisis management and socio-economic regimes), we may see an increase in the public's expectations on government to improve their crisis management capacity.

Institutional Overstrain and Stalemate Hypothesis[15]

Proposition 4: Overstrained decision-making units in transitional societies increasingly experience institutional stalemate resulting in poor detection skills, delayed crisis prevention and ineffective crisis response. In turn this will contribute to the increase in the number and severity of crises. With mounting crisis politicization, crisis managers will tend to focus on acute crises rather than on creeping crises, and focus on short-term political and economic issues at the expense of long-term social and environmental concerns.

Institutional stalemate can be characterized as a situation where it is recognized that action is needed but nothing is done and no one takes responsibility for the lack of action. In part institutional stalemate can be linked to the organizational culture inherited from the Soviet Union when a majority of decisions were subject to top-down management leaving the individuals in these organizations with the feeling that they did not need to (or that it was not even necessary) to take the initiative. The persistence of organizational cultural heritage and its effect on crisis management is explored in hypothesis two in this chapter. Another characteristic of decision-making and

[15] This section builds upon the section "Transitional Regimes and Bureau-Politics" in Stern and Hansen (2000: 17–18).

policy making in the Soviet era was the lack of accountability, something that contemporary Russia is working on establishing but with varying results. These norms facilitate social loafing, where no one takes initiative or responsibility for the management of an emerging problem (Latane, Williams, and Harkins, 1979). Centralized decision-making and poor accountability mechanisms contribute to creating institutional stalemate to the extent that they are still part of the organizational culture of transitional states.

Another characteristic of contemporary transitional states is the lack of means for coping with emerging problems which make pathological crisis behavior like denial or wishful thinking among decision-makers more common. Even in situations where decision-makers may be able to overcome institutional cultural constraints, they may not be able to take action because there is a lack of resources. Engaging in wishful thinking or denial tends to solidify institutional stalemate.

Summing up, institutional strain and institutional stalemate limit the opportunities to mitigate developing crises, and thus coordination and accountability mechanisms remain weak. Crises can perhaps be nipped in the bud when they first appear with effective early crisis management rather than being developing into a full-blown crisis. Because of institutional stalemate at various levels of decision-making, these full blown crises tend to escalate through the crisis management structure up to the highest decision-making level.

The Bureau-Politics Hypothesis[16]

Proposition 5: Transitional polities are likely to experience a high frequency and a high intensity of bureaucratic political behavior in 'normal' and crisis situations.[17]

Although commonly held notions of crisis solidarity seem to rule out a prominent role for bureau-organizational politics in crisis situations, substantial empirical research suggests that there is a close relationship between crises and bureau-organizational politics (Allison, 1971; Rosenthal, Hart and Kouzmin, 1991; Vandenbroucke, 1993). Such intra-governmental politics and organizational disputes may be-

[16] This section follows quite closely the section "Transitional Regimes and Bureau-Politics" in Stern and Hansen (2000: 17–18).

[17] This hypothesis is a reformulation of proposition five presented in the volume on Latvian crisis management (Stern and Hansén, 2000: 18).

come important 'second dimension' factors that have the capacity to generate or exacerbate crisis situations. A number of factors associated with the transition from an authoritarian regime to a more democratic one seem particularly conducive to bureaucratic politics. It has been argued that clear, effective, and legitimate divisions of labor within bureaucracies tend to inhibit bureaucratic politics (cf. Rosenthal and Hart, 1998). In transitional polities the distribution of power and authority is unsettled and therefore organizational units have more opportunities for gaining new territory and solidifying their power and resource base (cf. Higley, 1999: 51–55). Many complex issues are being dealt with for the first time and compelling precedents are likely to be lacking, which means that several agencies are likely to make a bid for responsibility and influence. Because crises tend to come as a surprise (Hermann, 1963), response to crises often occurs on an ad hoc basis, which (like other forms of transition) creates substantive room for bureaucratic maneuvering – even in a state such as Estonia which aspires to have a relatively institutionalized crisis management system (Kross, 1998; Tross, 1999). Crisis management legislation tends to be uneven (obsolete, lacking, or inadequate for the specific crisis circumstances decision-makers are faced with) and these gaps can be filled by competing organizational actors (Elster, Offe and Preuss, 1998: 18–19). As mentioned in Nohrstedt and Stern's analysis (1999), transitional polities tend to be characterized by relatively soft political-administrative systems which are subject to frequent change destabilizing emergent divisions of labor and routines, practices for interagency collaboration, and coordination. This creates tendencies parallel to so-called "new group syndrome" but at the policy regime level (Stern, 1997a) – a kind of new organizational situation in which conflicts can easily escalate into power struggles.

Overlearning and Reflexive Institutional Change Hypotheses[18]

Proposition 6: Transitional societies in crisis conditions tend towards reflexive institutional change and institutional volatility.

[18] This section builds on the section "Institutional Reform and the Learning Process" in Stern and Hansen (2000:18–19).

Proposition 7: In transitional (as opposed to established) democracies there is a high risk that crises will generate so called 'double loop' or 'third order' learning but there is even a greater risk for over-learning.

These two hypotheses stem from a reformulation and expansion of the proposition first introduced in Stern and Hansén (2000: 18–19) that crisis-prone transitional societies tend towards hyper-learning and institutional volatility.

Reflexive change refers to institutional or policy changes which are initiated as an immediate reaction to a crisis; the action of change, not necessarily the substance of it, seems most significant. This rapid and recurring initiation of change translates into institutional volatility as changes are implemented. One of the most prominent findings from the Estonian experience was the enthusiasm and pace with which the Estonian government engaged itself in institutional adjustments following a series of crisis experiences (Tross, 1999). The evaluation process suffered as a result of the rapid evolution and reformation of the crisis management system. The Estonian experience gives us reason to believe that some of the performance problems may have had as much to do with the difficulty the actors' faced in keeping up with the rapidly evolving crisis management structure as with the actual design flaws. Changes were made after almost every major crisis event (cf. Braun and Barany, 1999: 15), and it is from this experience the concept of reflexive change, as stated in hypothesis six, evolved.

The Polish experience also revealed that significant institutional volatility even though the pace and scope of institutional change in the crisis management sector did not seem to have been quite as dramatic in Poland as in Estonia (Golc, 1999). The aftermath of the 1997 Oder flood constitutes a noteworthy example of the Polish experience regarding institutional volatility since it occurred during a comprehensive restructuring of the emergency management system.

Crises seem to trigger change both in established and transitional societies (Stern, 1997b; Braun and Barany, 1999: 15–16). Associating the notion of a crisis only with threats is misleading since crises also frequently (if not always) open windows of opportunity. During these windows of opportunity, organizations and individuals can advocate certain ideas or policies with much success and suddenly find their ideas gaining strength and landing in more fertile

soil in the wake of a crisis (Kingdon, 1984). Part of the reason for this is that decision-makers are likely to oversee prior practices since they are faced with less than optimal performance (policies or weaknesses which have lead to or exacerbated the crisis) and develop ambition to improve it for the future. To some degree this is related to the perceived expectations and accountability issues, and may have very real consequences for the decision-makers' aspirations to remain in political office or in an administrative position.

One of the most demanding challenges for crisis decision-makers in democracies is the fact that regardless of what happens, they will be held accountable (Vertzberger, 1990). While the stressful weight of accountability may narrow the range of vision for crisis copers as crises wax, it also tends to produce promises about the future as they wane. If the above-mentioned inducement for organizational or policy change is more endogenously oriented, this latter points to the relationship between the entrusted officials and the public, media and elite observers. Arguably, this aspect of crisis management was not as prominent in the authoritarian Soviet Union, where accountability to the public (and the media) was limited.

In more established polities, the catalytic function of crises are tempered by the general inertia of relatively entrenched political and bureaucratic interests which tend to resistant the pressure to change. There is reason to believe that some of these braking mechanisms may be weaker in transitional polities. In transitional states, especially those where statehood has newly been (re-) established, governments may not have had enough time or experience to allow their practices to become entrenched to the same extent. As such, they are likely to be more open to seeing their practices and institutional arrangements as provisional and subject to revision in response to negative feedback.

Hypothesis seven elaborates and further develops the ideas on institutional reform and the process of learning in crisis prone transitional societies discussed in the volume on Latvian crisis management (Stern and Hansén, 2000: 18–19). Reflexive learning can be generated by over optimism for change and learning in transitional states; however, not all change is good if it is not thoroughly thought out and evaluated. However, the fact that institutions and decision-makers are less set in their ways and are not to the same extent entrenched in the values and norms of the new regime, this

creates more room for positive learning in transitional states. One of the big issues in the literature on organizational learning has been how and when organizations manage to engage in 'double loop' learning (Argyris and Schon, 1996) or 'third order' learning (van Duin, 1995). This form of learning focuses on the learning process itself and it occurs when an organization reflects upon the values which underline the organization's core activities. This reflection process enables changes in the organization's value system. In established democracies these core value systems are deeply embedded in the organization and may not be considered for discussion or revision, whereas in transitional states this may be possible because many other aspects are also being reevaluated and reformulated.

Overview

This volume is divided into three parts. The first part "Crisis Management in Russia: A Brief Look at the Institutional Context" focuses on the context of the crisis cases presented in part two. In Chapter 2 Mikhail Faleev (the Deputy Minister of EMERCOM), Dr. Valery Akimov (from the EMERCOM Strategic Research Center), and Prof. Boris Porfiriev outline the development and evolution of Russia's crisis management framework dating from the dissolution of the Soviet Union to the present. More specifically, it reveals the basic trends of change and key directions of development in national emergency and disaster legislation. Integrated and specific types of legislation, which regulate crisis policy planning and implementation, are also described. In addition, the chapter highlights the organizational structure, key functions and features of the national emergency management system (USEPE), and explores its development strategy for reducing the risk of a major crisis or disaster.

Chapter 3 "Types of Crises and Crisis Management Mechanisms in the Russian Media" is a study examining how crises are portrayed in the Russian press. The study is conducted by Dr. Alla Mozgovaia and a team of Ph.D. candidates from the Institute of Sociology of the Russian Academy of Sciences. They provide a typology of the Russian press and identify the political orientation of each publication. The media study also provides an overview of ten Russian crisis cases and examines how each case has been portrayed to the public in the Russian press.

The second part of the book, "Crisis Development and Response: Four Case Studies," consists of case studies in Russian crisis management. Chapter 4 "Managing the Alleviation of the 1995 Neftegorsk Earthquake Disaster" by Prof. Boris Porfiriev tells the story of the 1995 earthquakes. The chapter describes the devastation of the earthquake that hit the remote island of Sakhalin on a cold spring night in 1995, killing seventy-two percent of the population in the town of Neftegorsk. Porfiriev focuses on the difficult rescue operation that was severely affected by the fact that a majority of the local response team was injured or lost in the earthquake, leaving very few people able to deal with the disaster and who knew how to alert the regional and federal crisis management units. The authorities were poorly prepared and poorly equipped to handle the disaster, and the earthquake response was further delayed by a lack of trust regarding the alarm sent from the local residents to the regional center. The disaster quickly escalated up through the administrative structure and once the President was informed the subsequent management of the crisis remained in the hands of the central government. The Neftegorsk case also highlights how the central government quickly lost interest in the case which lead to serious policy implementation problems in the post-acute phase.

Chapter 5, "The Chernobyl Liquidators: The Issue of Social Welfare and Benefits for the Non-Professional Rescue Workers" written by Elena Shlikova, focuses on the crisis management in the aftermath of one of the most well-known disasters of the twentieth century. The case explores the practical and moral obligations in connection to helping those who sacrificed their own health and that of their children by assisting in the rescue operation after the meltdown at the Chernobyl nuclear power plant in 1986. Shlikova investigates the so-called 'liquidators' (the rescue workers) and their struggle to receive appropriate medical aid, financial compensation for their work, and official recognition of the sacrifices they made for the nation. The rescue workers were brought to the site (many against their own will as conscripts and reserve officers in the Soviet Armed Forces) not knowing the dangers they would be exposed to and without adequate protection. The Chernobyl liquidator case also illustrates how the victims formed an NGO in order to influence the federal government's crisis management policy and to improve how such matters are dealt with in Russia.

Chapter 6, "Crisis Management of the Ecological Disaster in the Town of Karabash" by Dr. Alla Mozgovaia, explores the management of the ecological disaster caused by the mining and production of copper ore in the town of Karabash. The case of Karabash serves as an example of this widespread problem in Russia and other former Soviet republics. Mono-production cities like Karabash were established during the Soviet era, and these hazardous and ecologically detrimental industries were the sole source of employment and income for these cities. Mozgovaia's study shows how new actors on the political scene (like NGOs) can influence the political agenda and direct the attention of government decision-makers to specific crises which were more or less neglected in the past. The case also reveals how structurally-created dependency can generate a crisis, amplify human suffering, and contribute to the perpetuation of a crisis. The Karabash case also illustrates the new role NGOs have in contemporary Russia by playing an active role in crisis management when government agencies can not adequately deal with a crisis because of institutional limitations and resource constraints.

Chapter 7 "The Kursk Submarine Accident: Coping with Value Complexity and a Credibility Crisis" is co-authored by Daniel Nohrstedt and Dr. Ludmila Minaeva. It takes a look at one of the most recent crises involving the problematic crisis components of national security, military personnel and military equipment. The rescue operation was very difficult and the Russian Navy was unable to save the men trapped inside the sunken submarine at the bottom of the Barents Sea. Despite early offers by a number of foreign governments to assist the Russian Navy in the rescue operation, the President did not authorize the Navy to accept such help until five days into the crisis. Several delays in communication between the military officers, the President's office and outside actors proved to be fatal. A number of uncomfortable issues were brought up in connection with the Kursk incident. The role of the domestic Russian media as well as the international media greatly increased the stakes for the Russian military and political leadership. Reporting on the case amplified the perceived time pressure and raised credibility issues for the national leadership. The case also served as a painful reminder to the families of the victims and the Russian public that military accidents are often swept under the rug in secre-

cy with many questions left unanswered. It was also a reminder for the international community that national security interests still hinder cooperation between countries during a crisis.

The third and final part of the book is called "A Comparative Analysis and Conclusions" and contains one chapter. The co-editors of the volume wrote Chapter 8, "Transitional Crisis Management." It consists of a comparative analysis of all of the cases included in this volume. The chapter centers around the propositions and hypotheses explored in the Introduction. It assesses the relative strengths of these ideas in light of the empirical material presented in the book. The chapter concludes with some reflections on the particularities of managing crises in a transitional state and the specific experiences of Russia.

The co-editors of this book accept the responsibility for the quality of the case studies presented. However, the accurateness of the data and the interpretation of it are the sole responsibility of each individual author.

References

Allison, G. (1971) *The Essence of Decision: Explaining the Cuban Missile Crisis*. Boston: Little, Brown and Co.

Allison, G. and Zelikow, P. (1999) *Essence of Decision: Explaining the Cuban Missile Crisis*. (2nd ed.). New York: Longman.

Arato, Andrew (1999) "Civil Society, Transition, and Consolidation of Democracy." In A. Braun and Z. Barany (Eds.). *Dilemmas of Transition: The Hungarian Experience* (pp. 225–250). New York: Rowman and Littlefield Publishers, Inc.

Barany, Zoltan (1999) "The Regional Perspective." In A. Braun and Z. Barany (Eds.). *Dilemmas of Transition: The Hungarian Experience* (pp. 91–112). New York: Rowman and Littlefield Publishers, Inc.

Bass, B.M. (1997) *Transformational Leadership: Industrial, Military, and Educational Impact*. Laurence Erlbaum Association.

Billings, R. and Hermann, C. (1998) "Problem Identification in Sequential Policy Decision Making: The Re-representation of Problems." In D. Sylvan and J. Voss (Eds.). *Problem Representation in Foreign Policy Decision Making*. Cambridge: Cambridge University Press.

Blumer, J.G. and Gurevitch, M. (1995) *The Crisis of Public Communication*. London: Routledge.

Bovens, M. and Hart, P. (1996) *Understanding Policy Fiascoes*. New Brunswick and London: Transaction Publisher.

Braun, A. (1999) "Introduction: The Continuing Dilemmas of Transition." In A. Braun and Z. Barany (Eds.) *Dilemmas of Transition: The Hungarian Experience* (pp. 1–28). New York: Rowman and Littlefield Publishers, Inc.

Braun, Aurel and Barany, Zoltan (Eds.) (1999) *Dilemmas of Transition: The Hungarian Experience.* New York: Rowman and Littlefield Publishers, Inc.

Breslauer, G. and Tetlock, P. (Eds.). (1991) *Learning in US and Soviet Foreign Policy.* Boulder: Westview.

Briede, J. (1998) "Latvian Human Rights Laws in the Context of the European Human Rights Convention." In T. Jundiz (Ed.). *The Baltic States at Historical Crossroads: Political, Economic, and Legal Problems in the Context of International Cooperation on the Doorstep of the 21st Century.* pp. 282–293. Riga: Academy of Sciences of Latvia.

Buzan, B. (1991) *People, States, and Fear: An Agenda for International Security Studies in the Post-Cold War Era.* Boulder: Rienner.

Buzan, B.; Waever, O. and De Wilde, J. (1998) *Security: A New Framework of Analysis.* Boulder: Rienner.

Edelman, M. (1988) *Constructing the Political Spectacle.* Chicago: Chicago University Press.

Elster, J. (1993) "Constitution-Making in Eastern Europe: Rebuilding the Boat in the Open Sea." *Public Administration.* Vol. 71: 1/2 (Spring/Summer), 169–217.

Elster, J.; Offe, C. and Preuss, U. (with Boenker, F.; Goetting, U. and Rueb, F.) (1998) *Institutional Design in Post-Communist Societies: Rebuilding the Ship at Sea.* Cambridge: Cambridge University Press.

Ender, L.R. and Kim, J.C.K. (1988) "The Design and Implementation of Disaster Mitigation Policy". In L.K. Comfort (Ed.). *Managing Disaster: Strategies and Policy Perspectives.* pp. 67–85. Durham: Duke University Press.

Evans, P.; Jacobson, H. and Putnam, R. (Eds.). (1993) *Double-Edged Diplomacy: International Bargaining and Domestic Politics.* Berkley: University of California Press.

Farnham, B.R. (1998) *Roosevelt and the Munich Crisis: A Study of Political Decision-Making.* Princeton: Princeton University Press.

Gardner, H. (1995) *Leading Minds: An Anatomy of Leadership.* New York: Basic Books.

George, A.L. (1980) *Presidential Decisionmaking in Foreign Policy: The Effective Use of Information and Advice.* Boulder: Westview Press.

Golc, L. (1999) "Legal Acts Regulating the Sphere of Civil Protection in Poland." Draft working report. Stockholm: CM Baltic/Europe.

Haney, P.J. (1997) *Organizing for Foreign Policy Crises: Presidents, Advisers and the Management of Decision Making.* Ann Arbor: The University of Michigan Press.

Hansén, D. and Stern, E. (2001) "From Crisis to Trauma: The Palme Assassination Case." In U. Rosenthal, R.A. Boin, and L.K. Comfort

(Eds.). *Managing Crisis: Threats, Dilemmas, Opportunities*. Springfield: Charles C. Thomas.
Hart, P. 't; Stern, E. and Sundelius, B. (Eds.). (1997) *Beyond Groupthink. Political Group Dynamics and Foreign Policy-Making*. Ann Arbor: The University of Michigan Press.
Hart, P. 't; Stern, E. and Sundelius, B. (1998) "Crisis Management: An Agenda for Research and Training in Europe." *Cooperation and Conflict*. Vol. 33: 2, 207–224.
Henry, R.A. (2000) *The Complete Guide to Crisis and Risk Communications... You'd Better Have a Hose If You Want to Put Out the Fire: Professional Tips, Tactics, Dos, Don'ts and Case Histories*. Windsor, California: Gollywobbler Productions.
Hermann, Charles (1963) "Some Consequences of Crises Which Limit the Viability of Organizations." *Administrative Science Quarterly*. Vol. 8., 61–82.
Hermann, M.; Hermann, C. and Hagen, J. (1987) "How Decision Units Shape Foreign Policy Behavior." In C. Hermann, C. Kegley and J. Rosenau (Eds.). *New Directions in the Study of Foreign Policy*. pp. 309–338. Boston: Allen and Unwin.
Hermann, M.G. and Hagen, J.D. (1998) "International Decision Making: Leadership Matters." *Foreign Policy. Frontiers of Knowledge: The State of the Art in World Affairs*. (Special edition). Spring issue, pp. 124–137.
Higley, John (1999) "Transitions and Elites." In A. Braun and Z. Barany (Eds.) *Dilemmas of Transition: The Hungarian Experience* (pp.47–68). New York: Rowman and Littlefield Publishers, Inc.
Janis, I. (1982) *Groupthink: Psychological Studies of Policy Decisions and Fiascoes*. (2nd ed.) Boston: Houghton Mifflin.
Janis, I. and Mann, L. (1977) *Decision Making: A Psychological Analysis of Conflict, Choice, and Commitment*. New York: Free Press.
JCCM (1996) *Journal of Contingencies and Crisis Management* Vol. 4: 2. Special Issue: New Directions in Reliable Organization Research.
Keeney, R. (1992) *Value Focused Thinking*. Cambridge: Harvard University Press.
Kegley, C.W. (1987) "Decision Regimes and the Comparative Study of Foreign Policy." In C.F. Hermann, C.W. Kegley, and J.N. Rosenau (Eds.). *New Directions in the Study of Foreign Policy*. pp. 247–268. Boston: Allen & Unwin.
Khong Y.F. (1992) *Analogies at War*. Princeton: Princeton University Press.
Kingdon, J.P. (1984) *Agendas, Alternatives and Public Policies*. Boston: Little, Brown and Company.
Kokk, M. (1999) "Refugee Crisis in Estonia, 1994–1995." In E. Stern and D. Nohrstedt (Eds.). *Crisis Management in Estonia: Case Studies and Comparative Perspectives*. Vol. 3. Stockholm: ÖCB [The Swedish Agency for Civil Emergency Planning].
Kokk, M. and Vaarik, D. (forthcoming) "Prisoners Release Program Fiasco." Draft working report. Stockholm: CM Europe.

Kopstein, Jeffrey and Reilly, David (October 2000) "Geographic Diffusion and the Transformation of the Postcommunist World." *World Politics*. Vol. 53, 1–37.

Korvig, Bennett (1999) "European Integration." In A. Braun and Z. Barany (Eds.) *Dilemmas of Transition: The Hungarian Experience* (pp.253–272). New York: Rowman and Littlefield Publishers, Inc.

Krasner, S. (Ed.). (1983) *International Regimes*. Ithaca, N.Y.: Cornell University Press.

Kross, E.N. (1999) "Alternative Institutional Models for Crisis Management and Civil-Military Cooperation." In L. Newlove (Ed.). *Coping with Value Conflict and Institutional Complexity*. Vol. 4. ÖCB [The Swedish Agency for Civil Emergency Planning].

Lagadec, P. (1997) "Learning Processes for Crisis Management in Complex Organizations". *Journal of Contingencies and Crisis Management*. Vol. 5: 1.

Larson, D.W. (1985) *The Origins of Containment: A Psychological Explanation*. Princeton: Princeton University Press.

Latane, B.; Williams, K. and Harkins, S. (1979) "Many Hands Make Light the Work: The Causes and Consequences of Social Loafing." *Journal of Personality and Social Psychology*. Vol. 37, 823–832.

Lawson, S. (1993) "Conceptual Issues in the Comparative Study of Regime Change and Democratization." *Comparative Politics*. Vol. 25: 2, 183–205.

Lebow, N. (1981) *Between Peace and War: The Nature of International Crises*. Baltimore: John Hopkins University Press.

Levy, J. (1991) "The Role of Crisis Management in the Outbreak of World War I." In A.L. George (Ed.). *Avoiding War: Problems of Crisis Management*. pp. 62–102. Boulder: Westview.

Levy, J. (1994) "Learning and Foreign Policy: Sweeping a Conceptual Minefield." *International Organization*. Vol. 48 (Spring), 279–312.

Lund, M.S. (1996) *Preventing Violent Conflicts: A Strategy for Preventive Diplomacy*. United States Institute of Peace.

Miller, W.L.; White, S. and Heywood, P. (1998) *Values and Political Change in Postcommunist Europe*. London: Macmillan Press Ltd.

Nohrstedt, S.A. and Tassew, A. (1993) "Communication and Crisis: An Inventory of Current Research." Psykologiskt försvar [Psychological Defense]. Rapport nr. [Report number] 163:1.

Nohrstedt, D. and Stern, E. (1999) "Conclusion: Patterns and Problems in Estonian Crisis Management." In E. Stern and D. Nohrstedt (Eds.). *Crisis Management in Estonia: Case Studies and Comparative Perspectives*. Vol. 3. 294–315. Stockholm: ÖCB [The Swedish Agency for Civil Emergency Planning].

Nordlund, R. (1994) "A Triangle Drama: Authorities, Citizens and Media in Crisis." Psykologiskt försvar [Psychological Defense]. Meddelande nr. [Newsletter] 136:b.

Pearce, D.D. (1995) *Wary Partners: Diplomats and the Media.* Washington D.C.: Congressional Quarterly Inc.

Perrow, C. (1999) *Normal Accidents.* Princeton: Princeton University Press.

Pridham, G. and Vanhanen, T. (Eds.). (1994) *Democratization in Eastern Europe.* London: Routledge.

Regester, M. and Larkin, J. (1998) *Risk Issues and Crisis Management: A Casebook of Best Practice.* London: The Institute of Public Relations.

Reinikainen, J. (1999) *Right Against Right: Membership and Justice in Post-Soviet Estonia.* Stockholm Studies in Politics 65. Dissertation. Dept. of Political Science, Stockholm University.

Rosati, J.A. (1981) "Developing a Systematic Decision-Making Framework: Bureaucratic Politics in Perspective." *World Politics.* Vol. 33: 2, 234–252.

Rosenthal, U.; Hart, P. 't and Kouzmin, A. (1991) "The Bureau-Politics of Crisis Management." *Public Administration Review.* Vol. 69, 211–233.

Rosenthal, U. and Hart, P. (Eds.). (1998) *Flood Response and Crisis Management in Western Europe: A Comparative Analysis.* Berlin: Springer Verlag.

Rosenthal, U. and Boin, A. (2001) "Paths to Crisis: A Multi-State Perspective." Draft chapter in U. Rosenthal, R.A. Boin, and L.K. Comfort (Eds.). *From Crisis to Contingencies: A Global Perspective.* Springfield: Charles C. Thomas.

Rubin, Barnett (1998) "Conclusion: Managing Normal Instability." In Barnett Rubin and Jack Snyder (Eds.). *Post-Soviet Political Order: Conflict and State Building* (pp.162–179). New York: Routledge.

Snyder, R.C.; Bruck, H. and Sapin, B. (Eds.). (1963) *Foreign Policy Decision Making.* New York: The Free Press.

Steinbruner, J. (1974) *The Cybernetic Theory of Decision.* Princeton: Princeton University Press.

Steinbruner, J. (2000) *Principles of Global Security.* Brookings Institute.

Stern, E. and Sundelius, B. (February 2002) "Crisis Management Europe: An Integrated Regional Research and Training Program." *International Studies Perspective.*

Stern, Erik (1997a) "Probing the Plausibility of Newgroup Syndrome: Kennedy and the Bay of Pigs." In P. Hart, E. Stern, and B. Sundelius (Eds.). *Beyond Groupthink: Political Group Dynamics and Foreign Policymaking.* pp. 153–189. Ann Arbor: The University of Michigan Press.

Stern, Erik (1997b) "Crisis and Learning: A Conceptual Balance Sheet." *Journal of Contingencies and Crisis Management.* Vol. 5: 2, 69–86.

Stern, E. and Verbeek, B. (Eds.). (1998) "Whither the Study of Governmental Politics in Foreign Policymaking: A Symposium." *Mershon International Studies Review.* Vol. 42, 205–255.

Stern, E. and Bynander, F. (Eds.). (1998) *Crisis and Internationalization: Eight Crises Studied from a Cognitive-Institutional Perspective.* Vol. 2. Stockholm: ÖCB [The Swedish Agency for Civil Emergency Planning].

Stern, E. and Nohrstedt, D. (Eds.). (1999) *Crisis Management in Estonia: Case Studies and Comparative Perspectives*. Vol. 3. Stockholm: ÖCB [The Swedish Agency for Civil Emergency Planning].

Stern, E. (1999) *Crisis Decisionmaking: A Cognitive-Institutional Approach*. Stockholm Studies in Politics 66. Dissertation. Stockholm: Stockholm University, Dept. of Political Science.

Sundelius, B. (1983) "Coping with Structural Security Threats." In O. Höll (Ed.). *Small States in Europe and Dependence: The Laxenburg Papers*. Vol. 6, 281–305. Vienna: Braumüller.

Sundelius, B.; Stern, E. and Bynander, F. (1997) *Krishantering på svenska – teori och praktik*. [Crisis Management the Swedish Way: In Theory and Practice]. Stockholm: Nerenius & Santérus förlag.

Sylvan, D. and Voss, J. (Eds.). (1998) *Problem Representation in Foreign Policy Decision Making*. Cambridge: Cambridge University Press.

Taylor, Philip (1997) *Global Communications, International Affairs and the Media Since 1945*. New York: Routledge.

Tross, J. (1999) "Crisis Management in the Republic of Estonia: An Historical Overview." In E. Stern and D. Nohrstedt (Eds.). *Crisis Management in Estonia: Case Studies and Comparative Perspectives*. Vol. 3, 22–59. Stockholm: ÖCB [The Swedish Agency for Civil Emergency Planning].

Vandenbroucke, L. (1993) *Perilous Operations: Special Operations as an Instrument of U.S. Foreign Policy*. Oxford: Oxford University Press.

Vertzberger, Yaacov Y.I. (1990) *The World in Their Minds: Information Processing, Cognition, and Perception in Foreign Policy Decisionmaking*. Stanford: Stanford University Press.

Waugh, W.L. (1988) "Current Policy and Implementation in Disaster Preparedness." In L.K. Comfort (Ed.). *Managing Disaster: Strategies and Policy Perspectives*. pp. 111–125. London: Duke University Press.

Wildavsky, A. (1988) *Searching for Safety*. New Brunswick: Transaction.

Part I
Crisis Management in Russia: A Brief Look at the Institutional Context

Chapter 2
Crisis Management Policy in Russia: The Institutional Framework[19]

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Introduction

As in the rest of the world, protecting the local residents and communities against multiple threats was a prerogative of the former Soviet Union's civil defense for decades. This was an organic component of the national defense system. Furthermore, the national defense system was responsible for protecting the people against military threats, primarily hostile nuclear attacks. During the tense years of the Cold War in the 1950s and 1960s, this had obvious political implications.

However in the 1970s and 1980s, peacetime threats (such as social conflicts, terrorist attacks, natural and technological disasters) became key issues for national security and public safety, and thus required appropriate changes in policy priorities. The scale and severity of such crises were increasing as the processes of poorly managed industrialization and urbanization (resulting from the Soviet Union's one-sided economic policy) were accelerating. Hazardous industries founded upon poor technological and safety management policies negatively affected human and environmental health. Consequently, technological accidents and disasters accounted for the bulk of crisis casualties in the former Soviet Union during the 70s and 80s.

In the 1980s alone, over a million people were seriously affected. On average, more than 150,000 people were injured each year of which at least 65,000 were immediately killed in industrial acci-

[19] This paper expands upon an earlier version by Boris Porfiriev (2001) "Emergency and Disaster Management Policy in Russia: Institutional and Legislative Issues," Journal of Hazardous Materials.

dents or died prematurely. The economic damage was also considerable with our assessments indicating the total direct and indirect economic losses soaring to 12–15% of the country's GDP (Porfiriev, 1998).

The mid 80s were marked by great political and economic changes in the former Soviet Union (namely *perestroika*) and by the world's worst radiation disaster in Chernobyl. These events marked the beginning of the shift away from the old 'military' paradigm of the national security policy. This was gradually replaced by a more comprehensive one, which seriously considered the other side of the national security: peacetime conflicts and non-conflict crises. These issues have become an increasingly organic and important component of national development and national security in Russia, both of which now constitute a specific area in crisis management policy.

This chapter focuses on the two main issues of crisis management policy. First considered is the institutional organization, which was shaped into the Unified State System for Emergency Prevention and Elimination of the Russian Federation or USEPE. In connection to this, the emergency legislation (which makes up the legal foundation of this organizational system) is also reviewed. Secondly, the theoretical basis, upon which key measures of the state's strategic program for reducing risks for natural and technological disasters, is also examined.

The Onset of the National Emergency and Disaster Management Policy

The radical political changes in the former Soviet Union in the second half of the 1980s coincided with a set of major emergencies, disasters and catastrophes (the 1986 Chernobyl accident and 1988 Armenian earthquake being the most devastating). This combination of circumstances facilitated and accelerated drastic changes within the existing national civil defense system.

In 1989, the State Emergency Committee of the Soviet Union was established. Some years later, an analogous committee with the same name was organized as a part of the Council of Ministers in the Russian Federation. This committee was later moved to the Administration of the President of Russia and changed its name to the State Committee of the Russian Federation for Civil Defense, Emer-

gencies and Natural Disaster Response (EMERCOM). This move served as official recognition that issues concerning community and regional protection in peacetime justify are also important, and justify increasing resources for such matters.

With the dissolution of the Soviet Union in December 1991, several independent states were created. The Russian Federation is the largest of them in terms of territory and population, and is considered to be the most developed of them. The 1993 Constitution consists of two types of entities (*soubyekti Federatsii*): national and administrative. The national entities include 21 autonomous republics, 10 autonomous districts (*okruga*) and 1 autonomous region (*oblast*). The administrative entities consist of 6 territories (*kraia*), 49 regions and 2 federal cities (Moscow and St. Petersburg).

At the regional level, people elect an assembly and a Governor or a Head of Administration. At the federal level, the President is elected by the entire general population and has significant power as the Head of the State. S/he has the final say when there is a dispute between the federal legislative body (*Federalnoye Sobraniye*) and the Government. In addition, the President establishes guidelines for domestic and foreign policies, including security and military policies given the fact that s/he holds the post of Supreme Commander of the Armed Forces. The President appoints the Government and the Prime Minister who then must be approved by the *Duma* (the lower chamber of the federal legislative body).

In the area of emergency and disaster management, the legacy of the Soviet Union did not have much to contribute to the political and administrative transformation of EMERCOM. In 1992 the Governmental Regulation §261 strengthened the role of EMERCOM by giving it the responsibility of developing and enforcing the task of preventing and responding to natural and technological emergencies and disasters (including those involving hazardous materials). The other federal agencies retained responsibility for handling other kinds of crises including conflicts. The basic issues of community and regional safety and of emergency and disaster management in terms of national security have been and actually are established by the President and the Security Council (the President's consultative organ).

In 1994, the federal legislative body passed "The Federal Act for Community and Regional Protection Against Natural and Techno-

logical Disasters/Emergencies." It is also commonly referred to as the 1994 Federal Emergency Act. This act strengthened EMERCOM and helped lay the foundation for USEPE.

The legislative and organizational changes of the mid 1990s increased the number of organizations and institutions involved in developing and implementing the emergency and disaster management policy, and respectively widened its operational coverage. Accordingly, the federal budget expenditures for USEPE increased. In the 1997 fiscal year, expenditures exceeded 8,000 million rubles or 2.1% of the total expenditure budget for the Government's special emergency fund.

In a more generic sense, the abovementioned changes marked the onset of the notion that the Russian state emergency and disaster policy was significant in regards to national development and national security. This was clearly noted by President Boris Yeltsin's 1996 annual address to the Russian Federal Assembly which was largely dedicated to national defense issues. Yeltsin emphasized in particular the need to protect individual and societal interests in emergencies caused by natural, technological and other such hazards. He regarded this to be one of the key areas for national security. This will be elaborated upon in this chapter, as well as the legislative and institutional framework of USEPE.

The Development of National Emergency Legislation

The radical political and socio-economic changes that followed the dissolution of the former Soviet Union had significant implications for Russian legislation. Amendments were made to the first federal laws on civil defense, environmental protection, and emergency and disaster management. These amendments in turn constitute the legal foundation for the institutional framework for national emergency and disaster management.

THE AREAS OF FOCUS FOR THE CHANGING LEGISLATION AND THE BASIC TRENDS

The changing legislation focused on mainly two different areas: 1. The national legislative system as a whole, and 2. Emergency and

disaster management in particular. Furthermore, several distinct trends appeared in the changing legislation.

One such trend was the *diversification* of legislation. The legal system has been increasingly enriched with new kinds of laws and regulations; first and foremost, those concerning emergency and disaster management. In general, emergency and disaster management legislation had been largely neglected during the Soviet years. Nearly 40 federal laws, 100 federal regulations, and more than 1,000 regional acts have been added to the total number of emergency and disaster laws in Russia. Hundreds of orders and regulations were also issued by a gamut of federal bodies incorporated in the USEPE (Gosudarstvennii, 2000; Fedulov, 1998; Fedulov, 2000).

Another visible trend in the changing legislation was the *integration* of emergency and disaster acts into one specific branch; thus, increasingly taking on the characteristics of federal legislation. Such integration implies, on the one hand, that the federal and regional lawmakers are seeking a clear-cut systematization and incorporation of existing acts. On the other hand, it involves the harmonization and unification of such acts with the principles and rules of international law (for example, those used by organizations like IAEA, UNDRO, UNEP, WHO, and WMO). Although the former Soviet Union, and later Russia, more or less conformed to the majority of international and regional standards in this field, there were serious gaps and delays in implementing national emergency and disaster laws.

A third trend in the changing legislation was the *federalization or centralization* of Russian emergency legislation. Unlike most of the Western nations where regional (state, provincial, etc.) legislation has been the cornerstone for developing a distinct emergency and disaster management policy, the bulk of the Russian Federation entities have simply copied the existing federal emergency and disaster acts. The RF entities are still searching for their own unique policies which adapt to their individual needs and resources. This has happened despite the fact that the Russian Constitution stipulates shared responsibility for emergency and disaster management by both the federal and regional authorities. Yet ironically when local and regional legislation is tailor made, it often contradicts the federal legislation (for example, in the area of property ownership, private enterprises, and taxation). Some experts have estimated that

10–12% of the regional economic legislation contradicts federal laws. This causes great confusion. As a result the President Putin was forced into taking tough measures in 2000–2001 against selected regional authorities in order to ensure some degree of legislation compliance. This in fact simply contributed to increased centralization in the development of the entire legislative process.

In general one can say that centralization has been a constant trend throughout Russian history; namely, in economic and social policies and legislation. Consequently, the regional authorities have been substantially lagging behind the federal government in developing and enforcing its own set of emergency and disaster laws, which complement (rather than contradict) the federal laws.

The fourth trend in the changing legislation has been *the increased emphasis on prevention and mitigation.* There is a gradual shift occurring from a predominantly reactive type of crisis management (focused on preparedness and response) to a more proactive (anticipatory) and flexible one (see also Appendix 2, section Q3). Such a shift demonstrates the lawmakers' desire to change the existing procedures regarding the distribution of federal budget funds which is in favor of a more reactive (rather than a proactive) approach to crisis management. In the 1996–1999 fiscal years, funds earmarked for mitigation (including special governmental funds for emergency response) and for disaster recovery and rehabilitation were relatively similar. The federal government intends to carry out a comprehensive mitigation program between 1999 and 2005 in order to reduce the risk of natural and technological disasters (Federalnaia, 1999).

However, it is important to note that despite the previously mentioned trends in Russia at the turn of the century, emergency and disaster legislation (primarily at the federal level) is still oriented to preparedness and response rather than prevention and mitigation. The latter still has a lower priority in legislation and, consequently, has experienced a shortage in funding. One reason for this is that little time has passed since the new aims were presented and more time is needed to solidify funding and the new priorities.

Another reason for the lack of action can be the pressing needs put upon decision-makers who must compete for scarce resources. Funds for coping with the devastating effects of disasters are solicited more eagerly and more successfully than funding for prevention

and mitigation. Fifty percent more money is allocated from the Russian federal budget for existing expenditures than for prevention, mitigation, recovery and rehabilitation. Partially this can be explained by the financial managers' desire to reduce expenditures by focusing mainly on actual, concrete costs. In their view, funds for prevention, mitigation, recovery and rehabilitation could very well turn out to be 'useless' if no emergency occurs or if rehabilitation is unsuccessful. Yet at the same time such issues have been pushed forward by the affected communities. The public demands more spending, without question or delay, when an emergency or a disaster strikes.

TRENDS IN EMERGENCY AND DISASTER LEGISLATION

Substantial changes in the Russian emergency and disaster legislation are currently in progress and focus on two main areas: 1. New laws and acts concerning toxic materials, and 2. Harmonization and specification of the existing laws. The first trend, the development of new laws and acts, centers on reducing the risks associated with new toxic materials. New means and methods for legislative regulations are being enforced retroactively in order to cope with existing emergencies and disasters. The second trend is the harmonization and specification of existing laws. Amendments have been adopted and additional clauses have been added to existing laws, regulations and instructions, which provide for a better distinction of responsibility and coordination between the key bodies and services engaged in emergency and disaster management.

In practice both trends in emergency and disaster management policy are closely intertwined. This creates a more or less holistic legislative framework for preventing, preparing for, responding to and recovering from emergencies and disasters. In Russia this demands a lawmaker's approach, since the formal relations between community members during an emergency are different than those existing during a non-emergency situation. Thus, this logically requires the development of a comprehensive normative act, which can serve as an umbrella for all of the existing regulations in the field of emergency and disaster management. This was essentially achieved when the 1994 Federal Emergency Act was enacted. The 1994 Federal Emergency Act addresses the following issues:

- Principles, tasks, functions and key organizational features of the USEPE.
- Responsibilities of the federal, regional and local authorities; special federal and regional emergency services; and volunteers in the area of civil protection.
- Guidelines for public preparedness for emergencies and disasters.
- Procedures for delegating financial and material support for community and regional protection in the event of an emergency or disaster.
- Tasks, functions and liabilities of the state's expertise, supervision and control in the area of civil protection.

Given such coverage many experts consider the 1994 Federal Emergency Act to be an umbrella for the existing laws and regulations concerning various types of emergencies. However, even though the 1994 Federal Emergency Act is considered to be extensive, it is not comprehensive and even less exhaustive. It regulates protective measures for natural and technological hazards (including those involving toxic materials), but does not take into consideration the issue of conflict-oriented crises (mass disturbances, riots, regional wars, etc.). Such crises are, or should be, covered by other acts. Even the best possible 'umbrella law' in Russia is still insufficient for building an integrated system of laws, which can regulate the legal matters of emergency and disaster management. A collection of interrelated acts, which can manage specific functions and types of emergencies and disasters, is needed in order to create such a system.

Typology of Emergency and Disaster Legislation

Any set of laws should constitute a specific area of legislation or at least synchronize the existing legislation. However, this has not been the case in Russia, despite all of the efforts put into the 1994 Emergency Federal Act. The tradition of a piecemeal and fragmented legislation system prevails in Russia and little progress has been made in developing an integrated national system for emergency and disaster legislation. Yet there are signs that the nation is well on its way to bridging the gap and, perhaps, in the foreseeable future will be

able to merge the two general areas of emergency and disaster legislation, which could be conditionally labeled as systems (integrated acts) and specific individual acts. While the former covers the whole gamut of community and regional protection, the latter regulates either a particular crisis or a whole set of emergency and disaster management tasks for a specific type of crises.

Before proceeding, it is worth reiterating that this artificial division of acts has been useful for research and for acquiring a better understanding of the spectrum of existing emergency and disaster legislation in Russia. Yet such a demarcation is to a great extent conditional.

Integrated Acts provide the basic conceptual framework, principles, goals and tasks of the national emergency and disaster management policy in Russia. These include about 40 federal laws from which just a few of the most important are mentioned here. First of all, the Constitution of the Russian Federation was adopted in 1993. Specific paragraphs clearly uphold a citizen's right to life, health and property with the protection of these being the key objective of the state emergency and disaster policy. Notwithstanding, the Constitution stipulates certain restrictions on these rights and freedoms in order to ensure the safety of all during a crisis: for example, when the President of Russia has declared a state of emergency.

In addition to that, the 1992 Security Act formulates the basic concepts associated with the mission and goals of emergency and disaster management including "security," "safety," and "security and safety system." It also states the principles, main components and functions of a "security and safety system" in the event of an emergency. Paragraph 10 of this act clearly distinguishes the powers of the federal legislative, executive and judicial bodies within the national security system. While similar distinctions are also made between the federal and regional authorities in this act, such distinctions are more clearly formulated in the Constitution of the Russian Federation. An inventory of the basic means used to ensure state security and safety policy implementation is specified in Paragraph 12 of the Security Act. Paragraph 12 has since been supplemented by subsequent decrees and regulations by the President and by the Russian government.

As mentioned earlier, the 1994 Federal Emergency Act serves to incorporate all of the existing acts concerning non-conflict crises in peacetime. It was adopted in 1994 and was supplemented in 1995–1998 by a series of governmental regulations classifying natural disasters and technological accidents, community preparedness, the exchange of information during a crisis, and matters concerning the USEPE (organizational structure, functions, tasks, and means). Conflict-oriented crises are beyond the scope of this discourse and, thus, are not considered in this chapter. (Those interested are recommended to see Porfiriev, 1999). Conflict-oriented crises are regulated by other federal laws and are enforced by state security institutions including among others: the Ministry of the Internal Affairs, the Ministry of Defense, the Federal Security Service, and the Federal Frontier Service.

The intention was that the 1994 Federal Emergency Act would supplement and specify the more general 1992 Security Act in terms of natural and technological disasters without needing to directly address such issues in the Constitution. Yet this approach has restricted and debilitated the comprehensive aspect of the 1994 Federal Emergency Act. More importantly, the scope and comprehensiveness of the USEPE are limited even although the name of this institutional system (The Unified State System for Emergency Prevention and Elimination) implies otherwise.

The shortcomings of the Russian emergency and disaster legislation originate from a focus on the causes of a disaster rather than on the effects produced or the necessary response. This view has been extensively criticized, and rightly so, over the past 10–15 years by international scholars, who have stressed the need to address social concerns. (For a review of this discussion, see Quarantelli, 1998). Even more importantly are the practical implications of this "one type of crisis" approach in emergency and disaster management. For instance, the US and Canada also have a similar "one type of crisis" approach, but effectively use the most applicable tools for changing the existing national emergency legislation and management systems.

Specific Individual Acts characterize the other type of Russian emergency and disaster legislation. Such acts can be subdivided into two groups: (1) those which cover particular types of emergencies and disasters, and (2) those which deal with particular functions,

tasks, agencies or services (ministries, fire services, medical services, rescue work, etc.).

Federal laws regulating the risks associated with toxic materials and accidents are included in the first group. For instance, in the event of a hazardous chemical leak or an on-site oil spill, one should immediately refer to the 1997 Industrial Safety of Hazardous Production Facilities Act, the Russian equivalent of the 1996 Seveso II Directive in the EC countries. The 1991 Environmental Protection Act covers the management of oil spills and the discharge of hazardous chemicals. Federal legislation for radiation hazards is covered in the social protection acts for people affected by radiation disasters in the South Urals and Chernobyl (as amended in 1999), or in the 1995 laws regulating the use of atomic energy and ensuring radiation safety.

The second group is comprised of acts which deal with specific functions and tasks and/or which involve specific crisis management agencies or services. Worth special mentioning is the 1994 Act for Emergency and Rescue Services Including Rights for Rescue Workers. This covers the whole gamut of activities related to the tasks involved in preventing and dealing with an emergency (including accidents involving hazardous materials). Numerous presidential decrees and governmental regulations supplement these federal acts. The acts which regulate specific emergency and disaster management functions are described in more detail in the next section.

National Emergency and Disaster Management: Key Functions and Features

As an organizational system, the Unified State System for Emergency Prevention and Elimination of the Russian Federation (USEPE) protects individuals and the nation as a whole by implementing measures for preventing, preparing, responding, and recovering from emergencies and disasters provoked by natural and technological disasters. Crises precipitated by social and political threats are dealt with by different institutional systems which oversee public health, public order and national security: Ministry of Health, the Ministry of Internal Affairs and the Federal Security Service (see Appendix 2, section Q1). The policies of these systems are beyond the purpose of this discussion.

USEPE's organizational composition stipulates various operative tasks, areas of responsibility and authority, and the decision-making levels in the event of an emergency. USEPE's centralized coordination for contingency and operation planning tries to utilize grassroots methods for implementing plans and for responding to emergencies and disasters.

An Organizational Overview of the USEPE

In accordance with the aforementioned requirements, the USEPE is organized along geographical boundaries (spatial criteria) and according to certain objectives (criteria regarding purposes and functions). Thus, there are two subsystems under USEPE: a spatial subsystem (territorial) and a functional management subsystem.

The *spatial or territorial subsystems* are organized by the executive authorities of the Russian Federation entities and the local authorities based along the existing administrative and spatial divisions of the national territory (as stipulated by the Constitution of the Russian Federation). These subsystems include: management bodies, public administration, the executive authorities of the Russian Federation entities, and the local authorities and organizations responsible for community and regional protection against natural disasters and technological hazards. The USEPE has more than 5,000 spatial subsystems in 89 Russian Federation entities, over 1,000 subsystems in the largest urban areas and more than 2,200 subsystems in the rural areas. In 2001 there were 88 Russian Federation entities (excluding the Chechen Republic) with 576 regional emergency commissions and committees.

The *functional subsystems* are organized by the federal executive authorities and consist of the federal government, the federal ministries and departments responsible for emergency prevention and response in the areas, and various industries. The functional subsystems consist of mainly three tasks: monitoring (observations and inspections), operational management (emergency preparedness, response and recovery), and logistic support (material, technical, financial, etc.).

The composition and primary functions of the USEPE coincide with the tradition view of emergency and disaster management, which has primarily focused on response and recovery measures.

The former Soviet Union was lacking urgent federal and regional response services and had for decades simply deployed the army, the local police and various fire-fighting units during a disaster. The Soviet policy for crisis management focused on reacting to crises rather than on planning and trying to prevent them from occurring.

However, in recent years the situation has changed and now there is more emphasis on planning and prevention within the USEPE. For example, "The Federal Targeted Program for Risk Reduction and Mitigation of Natural and Technological Disasters in the Russian Federation by 2005" was enacted in 1999 (Federalnaia, 1999). This is considered in more detail later in this chapter.

THE USEPE MANAGEMENT LEVELS: COMPOSITION AND FUNCTIONS

The USEPE involves five basic levels for making and implementing decisions with special consideration given to the severity of the emergency or disaster. These include:

- Organizational level – an enterprise, institution, etc.
- Local level – a town, a city district, or a small to medium sized city.
- Regional level – a Russian Federation entity.
- Macro-regional level – an area roughly the size of two RF entities.
- Federal level – two or more RF entities or the entire nation as a whole.

If an emergency or disaster strikes an area or facility owned by the federal government (for example: a nuclear power plant, a chemical factory, or the coastal boundary), the crisis would be handled at the federal level and, to a lesser extent, the regional level. Each of the abovementioned USEPE levels has a similar composition regarding how monitoring and operational matters are conducted. Among these are coordination groups and permanent operational and monitoring agencies which are especially authorized to provide community and regional protection during an emergency or disaster; to allocate financial, material and technical resources; and to initiate communication, warning and information support systems.

The coordination groups conduct strategic and tactical planning primarily associated with prevention and response preparedness. This involves the development of specific federal and regional emergency programs and plans. These bodies also provide management for implementation. They bear the responsibility for ensuring the availability, reliability and effectiveness of the warning and response systems, and for coordinating the recovery activities. Between 1995 and 2000 some dozen federal and regional programs were developed and implemented at various stages for the prevention and mitigation of major emergencies and disasters. This included the aforementioned "Federal Target Program for Risk Reduction and Mitigation of Natural and Technological Disasters in the Russian Federation by 2001" which serves both as a cornerstone and as an organizational umbrella for other related federal programs.

First of all, at the federal level, the Interdepartmental Commission for Emergency Prevention and Response is one of the USEPE's coordinating bodies. It is composed of the Deputy Ministers and Chairs of the federal ministries and state committees involved in emergency and disaster management issues, and is headed by the Prime Minister. According to Russian law, the Prime Minister is the Head of the Russian Civil Defense, yet in everyday matters civil defense is managed by the Ministry for Civil Defense, Emergencies and Natural Disaster Response (EMERCOM). The Head of EMERCOM is a Federal Minister, the Deputy Chief of the Civil Defense, and the Commander-in-Chief of the civil defense troops.

Secondly, EMERCOM and the emergency commissions within each of these ministries and state committees are also federal coordinating bodies. EMERCOM is the key federal governmental body responsible for coordinating civil emergency planning, search and rescue operations, and the evacuation process during major natural disasters and technological emergencies. Meanwhile, the other emergency and disaster management functions (fire fighting, medical care, transportation, maintaining public order and other services carried out during major operations) are the responsibility of other federal agencies. In total there are about 30 agencies, including: the Ministry of Interior, the Ministry of Health, the Ministry of Transportation, the Ministry of Communication, as well as a few other ministries, state committees, and federal services.

At the macro-regional level, seven EMERCOM regional centers deal with the coordinating efforts within the USEPE. At the regional, local and organizational levels these bodies have emergency commissions or emergency committees composed of executive authorities from the RF entities, of local authorities and of various organizations.

The USEPE's *permanent operational and monitoring agencies* (which are authorized to provide community and regional protection during an emergency) carry out the functions of operational planning and management by preparing contingency and operational plans. They also oversee and monitor the implementation plans, in particular those concerning emergency preparedness and response. At the federal and macro-regional levels, EMERCOM and its seven regional centers are the main state bodies responsible for such matters. At the regional and local levels, this responsibility is placed upon the staff of the Civil Defense and the Emergency and Disaster Management Commissions. At the organizational level, the Civil Defense and the Emergency and Disaster Management Department (or certain authorized persons within these respective institutions) exercise these functions.

The USEPE's routine *operational and monitoring agencies* provide supervision and information support to the responsible agencies dealing with emergency and disaster management and provide operational support during an emergency. These bodies include the EMERCOM's central Crisis Management Center (at the federal level), the On-Duty Operational Services of the EMERCOM regional centers, and the permanent regional Emergency Commissions for the individual governments of the RF entities. These services are increasingly being transformed into Crisis Management Centers. The specific ministries of the Russian Federation entities at the regional level also utilize the On-Duty and Dispatch Services. At the local level routine operational tasks and monitoring are conducted by the local On-Duty Operational Services, which in the bigger cities are being increasingly transformed into Unified On-Duty and Dispatch Services. All of these changes are scheduled for completion in 2005 (Federalnaia, 1999; Gosudarstvennii, 2000).

Within the USEPE's functional subsystems, permanent operational and monitoring agencies carry the burden of developing and implementing measures for preventing and mitigating disasters and

emergencies. The main role of EMERCOM is to be the key coordinator in major emergencies and disasters.

As for minor accidents (which constitute the bulk of officially registered emergencies), these are the responsibility of the local and regional police, emergency services, medical services and technical support services. Considering the substantial resources concentrated at the federal level, the EMERCOM headquarters should not only be considered a key emergency planning and coordinating agency but also as an important response actor. The bulk of the search and rescue units in the various regions are operated by the EMERCOM regional centers and by the regional and local authorities. However, these units are not strong enough to provide an effective response independently (i.e. without help from the federal level) since there are just a few units and they are widely scattered across the country. The problem is further complicated by the fact that the USEPE's function subsystems underwent dramatic changes in 2000 and 2001. Thus, there is a shortage of trained emergency personnel and limited resources at the regional and local levels within the USEPE spatial subsystems.

THE OPERATIONAL STAGES OF USEPE AND ITS FORCES

All emergency operational and monitoring organs act as control centers for each of the USEPE decision-making levels and manage their respective forces, which execute their orders and directives. In order to satisfy the functions of USEPE, these *forces* must be subdivided into two parts: those dealing with routine monitoring and operational activities, and those involved in emergency response actions.

At the federal level the forces dealing with routine matters primarily consist of services and institutions from the federal ministries and state committees, which are responsible for monitoring the environment and medical examinations, and for screening hazardous facilities and the adjacent areas. In addition to these functions, USEPE performs risk assessments on human health and areas exposed to hazardous materials. The USEPE's forces for monitoring and operational activities include interdepartmental organizations and services, which are not officially associated with the federal government. One such organization is the National System for Sur-

veillance and Laboratory Control of Hazardous Substances, under which there are various research centers including the Russian Academy of Science. In recent years there has been a growing trend towards consolidating these forces under the auspices of EMERCOM in the same group with hazardous substance surveillance.

The USEPE group dealing with major emergency response issues is comprised of fire services, search and rescue services, emergency services, emergency technical support and emergency recovery units. In the area of technological emergencies, there are emergency technical centers at the Ministry for Nuclear Energy and search and emergency rescue units at the Ministry of Transportation. Above and beyond those previously mentioned there are also emergency medical care, militia (police), regional and local civil defense units, and construction and transportation companies. Within the permanent forces at the federal level, the key actors in emergency and disaster management include the Crisis Operational Centers and the operational units within the 13 federal ministries (with the units at the Ministry of Internal Affairs, Ministry of Health, and EMERCOM comprising the bulk of the total response strength).

Depending on the situation, USEPE performs any of the three basic *operational stages:* routine (ordinary), alert (increased readiness) or emergency (extraordinary). The routine stage implies establishing a day-to-day way of living for the communities in times of peace and includes minor incidents and disturbances, which do not significantly disrupt communications or the fabric of a community. Environmental monitoring and monitoring of hazardous facilities, contingency planning, setting up and supplementing emergency reserve funds, emergency personnel training, and public information support are the key tasks in the routine operational stage. During the alert stage (increased readiness), the USEPE subsystems must be able to function and deal with a perceived crisis or an actual worsening of radiation, chemical exposure and some other environmental threat. This stage serves as forewarning for a potential emergency and/or disaster. In the emergency stage (extraordinary), the USEPE components must be able to operate in actual emergency conditions, and must immediately eliminate or alleviate undesirable social and environmental effects.

The procedures dictating the involvement of the USEPE forces for responding to and recovering from an emergency or disaster are

quite similar to those in many other developed countries. Involvement requires that there are sufficient resources for saving lives, for safeguarding material goods and property, and for protecting the environment. The USEPE is increasing involved as a situation worsens and transforms itself into a major catastrophe.

The organization of recovery and reconstruction work has been traditionally the prerogative of the local authorities and organizations. The local organizations make use of the available workforce located in the affected or adjacent areas (primarily firefighters, the police, medical care and emergency services). If the impact or damage is beyond the capabilities of the local authorities, they apply for external help. Yet more often such appeals are given directly to the federal government rather than to the neighboring regions. The reason for this is the 'centralization syndrome.' The current local and regional administrators are products of the former Soviet Union and, more importantly, the concentration of economic and administrative power still remains in the hands of the federal authorities.

During an actual emergency, mayors and governors in the affected regions often call upon the regional EMERCOM operational centers for assistance. If the conditions of the disaster are too complicated for just one center, the EMERCOM Central Rescue Unit in Greater Moscow and the civil defense and rescue units in the neighboring regions are immediately called upon. In the case of a macroregional or national emergency, the EMERCOM Minister seeing the need to impose a state of emergency may ask the President of the Russian Federation to make the decision to deploy army units. In addition, other military units and troops can be called in to assist with the emergency.

Disaster Risk Reduction as USEPE's Development Strategy

As mentioned above, the current decade marks the start of the USEPE's dramatic shift towards a more anticipatory and flexible organization and towards using disaster risk reduction as the conceptual basis (see also Appendix 2, section Q3). The USEPE's new development program is "The Federal Targeted Program for Risk Reduction and Mitigation of Natural and Technological Disasters in

the Russian Federation by 2005" (hereafter in this section referred as the Risk Reduction and Mitigation Program [RRMP]).

The RRMP was developed jointly by EMERCOM and the Russian Academy of Sciences[5] and was formally approved by the Government of the Russian Federation in Decree No 1098 on September 29, 1999. The RRMP supports the substantial reduction of natural disasters and technological risks in order to increase individual, societal and environmental safety and to create conditions for sustainable national development (Federalnaia, 1999).

The Conceptual Fundamentals and Contents of the Risk Reduction and Mitigation Program

Considering that the notions of risk and risk reduction are the key concepts in the new emergency and disaster management policy, it would be more accurate to use the concept of acceptable risk here. According to this concept, the risk of a crisis (including those associated with natural or technological disasters) is calculated by the number of potential human victims and the potential material damage incurred by an adverse agent or event. The possibility or frequency of such events significantly varies within a certain period of time (see Table 1).

Table 1: Crises Frequency in Russia

Type of Crisis	One-year-frequency
Technological Accidents	900–1,200
Fires and explosions	350–450
Pipeline accidents	60–80
Air crashes	20–40
Road traffic accidents (four and more people killed)	120–150
Rail accidents (with four and more people killed)	15–20
Dam failures	4–8
Natural Disasters	**200–500**
Forest fires (affected area larger than 100 ha)	100–200
Hurricanes, tornadoes, storms	80–120
Epidemics and Epizooties	**100–150**

In addition, the concept of acceptable risk implies that the risk of a crisis is acceptable at certain levels or degrees, which a community or a nation believes can be justified. Community members or citi-

zens, whose safety for some reason has not been guaranteed to an acceptable level, should receive some social and economic privileges and benefits from society. Given the various decision-making levels involved, the notion of acceptable risk could be, and is, interpreted and applied in many different ways.

At the regional, national and global levels the notion of sustainable development (which involves primarily the concern for future generations) is formulated by international organizations and by a number of individual countries. At the intra-national or community level, the concept of acceptable risk is, or should be, formulated by the national government. At the individual level, this concept of a justified risk focuses on the individual's life and key values which could be threatened (See Table 2).

Table 2: Risk Management Goals at the Various Decision-Making Levels

Decision-Making Levels	Risk Management Goals
Global and regional	Sustainable development
Intra-national and community (including family)	Acceptable risk
Individual	Justified risk

The interpretation of an acceptable risk in a crisis, based on a statistical analysis of crises' relative frequencies, was used in developing and implementing the Risk Reduction and Mitigation Program. This was slightly amended to include the economic consequences of a crisis, a sort of 'cost-benefit' risk analysis. Within this framework, risk serves as a measure of expected losses during a crisis so that limited resources are distributed in such to maximize their utility.

The two other basic concepts of an acceptable risk in a crisis, namely psychological and sociological interpretations, were basically beyond the scope of the Risk Reduction and Mitigation Program. The psychological approach focuses on studying individual behavior and risk/opportunity preferences, while the sociological approach analyzes how crises impact the broader context of group norms, values, interests and cultural traditions.

The conceptual framework for the Risk Reduction and Mitigation Program provided the development of six subprograms, which highlight the key aims of the USEPE strategy in the first decade of the new century. These subprograms are as followed:

1. Development of a methodological and legal foundation for providing measures to reduce risk and mitigate emergencies and disasters.
2. Development and implementation of measures which identify hazards and comprehensively analyze risks.
3. Development and implementation of measures for monitoring and forecasting natural disasters and emergencies.
4. Development of an information system for emergency and disaster risk management, including communication and warning systems.
5. Development and implementation of measures for risk reduction, disaster mitigation and emergency services at the local and regional levels.
6. Development and implementation of emergency training for the general public and for USEPE professionals.

The measures mentioned in each of the six subprograms are specified further in Appendix 1. These subprograms are to be implemented by 15 federal executive bodies and 34 regions (in other words, 27.6% of the Russian Federation entities which signed an agreement with EMERCOM about developing regional programs.

Federal funds are to be used for financing:

- R&D works relevant for the RRMP as a whole.
- Development of legislation and other official documents for the advancement of the USEPE.
- Development and improvement of technical resources for the USEPE.
- Development and improvement of software, information and technical support for USEPE management.
- Training USEPE specialists at the federal level.
- Provisions for managing, monitoring and screening laboratories, and USEPE units and agencies at the federal level.

Funds to the RF entities have to be used for financing the following specific tasks:

- Development and implementation of measures for reducing certain risks and disasters most typical for specific regions in Russia.

- Emergency training and material support for individuals and the communities in the various regions in Russia.
- Technical support for emergency response units in the RF entities.
- Accumulation and replenishment of material and financial resources for emergency response at the regional level.

The subprograms and the specific tasks of the RRMP are divided up into two implementation stages. The first one entailed the development of scientific, management and economic principles for emergency and disaster risk analyses and for risk management between 1999 and 2001. The remaining tasks should be carried out from 2002 to 2005.

There are more than 60 tasks. Worth special mentioning are those providing further development of the methods for monitoring risks and for forecasting crisis occurrences, especially those provoked by natural disasters. To identify and operatively predict the incidence of these in the early stage, one needs a well equipped and a well-attuned national monitoring system.

The Federal Emergency Monitoring and Forecast System (which involves EMERCOM and a few other federal agencies) is being permanently improved and updated. Also worth particular mentioning is the subsystem for operational forecasting of an earthquake's aftermath using GIS (geographical information system) technologies. This subsystem is successfully functioning now. The GIS contains data about the population, infrastructure and the industrial facilities in every settlement in the Russian Federation. Utilizing data from the Internet regarding an earthquake's epicenter coordinates and magnitude, the system issues a forecast of the earthquake's effects, expected aftermath, and the number of units that should be activated for the emergency response.

As for technological crises, the RRMP stipulates the type of development and installment of federal and regional systems for monitoring and forecasting possible accidents (that is, acceptable risk standards and norms which are compatible with those enforced in most developed countries). The RRMP also includes economic support (including insurance mechanisms) and training (for emergency units and community members) as a means of reducing technological risks to a more acceptable level.

Implementation of the RRMP in 1999–2000 and Expectations for the Year 2005

The first implementation efforts invested into the RRMP for R&D activities resulted in a number of valuable goals. These include:

- A draft of the National State Policy for Disaster Risk Reduction.
- Concepts of sustainable development, and acceptable and justified risk for emergency and disaster management.
- Social criteria for community safety and national security during natural and technological disasters.
- Improved classification of natural and technological disasters.
- Improved methods and procedures for risk evaluations.
- New and improved methods for forecasting technological and natural disasters.
- Increased accuracy of natural disaster forecasting.
- The use of advanced information technologies for risk monitoring and for forecasting emergencies and disasters.

The economic crisis in the 1990s and budget constraints (stemming from the Russian debt to the West) seriously hindered the full implementation of the goals made in the first stage of the RRMP. Some estimates suggest that in 1999–2000 the real allocations were 60% less than the appropriations endorsed in the federal budget by the State Duma.

Nevertheless, this should not blur the fact that the national emergency and disaster management policy was increasingly shifted from a response-oriented strategy to a mitigation strategy and some significant changes are visible. In particularly the National System for Surveillance and Laboratory Control of Hazardous Substances was reorganized in 1999. This system merges and strengthens both the spatial and the functional subsystems' capacity for forecasting and monitoring hazardous chemicals and radioactivity, among other things. Nearly 60% of the system i(almost 7,000 organizations) is affiliated with the Ministry of Health and the Ministry of Agriculture; the other 40% primarily comes from the Hydrological and Meteorological Service and the Environmental Protection Office of the Natural Resources Ministry (Godudarstennii, 2000).

The second stage focuses on implementing the goals established in the first stage (in 2001). This means that the implementation of specific investment projects and specific business plans are currently being developed. The key areas covered by these projects will entail:

- Further advancement of the disaster monitoring and forecasting systems.
- Improvement of air and satellite systems used for monitoring highly hazardous areas.
- Development and implementation of an information support system for emergency and disaster management.
- Modernization of the centralized automated warning system at the local level.
- Accumulation of material resources for disaster mitigation and provisions (basic needs) for people affected by a disaster.
- Medicine and other provisions for communities living in high-risk zones.
- Implementation of robotic and aviation systems for emergency response.
- Organizational and technological integration of the on-duty dispatch services in the urban areas.
- Implementation of mobile systems for assessing the seismic resilience of buildings.
- Equipping the Federal System for Seismological Surveillance Earthquake Control (a part of USEPE) with modern digital stations.
- Developing a system for training specialists in the area of disaster and emergency monitoring, forecasting and inspecting.

If successfully implemented, it is expected that by 2005 disaster risk reduction and emergency mitigation measures will help to reduce potential economic losses by 40–50% in the most vulnerable areas in Russia prone to environmental contamination. These measures should also cut the number of people killed in technological accidents by one-third since many of these accidents can be totally prevented (Federalnaia, 1999).

Conclusion

The ten-year experience of the Russian emergency and disaster management policy reveals contradictory trends. In the area of legislation, the increasing number of regulations enacted at all levels of government has been a positive trend. These regulations cover a wide range of critical issues in emergency policy and the juridical relationship between management actors. However, the scope and quality of the existing legislation still do not meet all of the basic needs and requirements for civil emergency and disaster management in Russia.

This calls for a more thorough and critical analysis of the past efforts made at the national level in this area. In addition, an intensive and comprehensive study of international legislation and experiences in coping with major emergencies and disasters (in particular those accidents involving hazardous materials) would be insightful. The historic example of Seveso I Directive (later followed by Seveso II Directive) strongly supports the idea that thoughtful legislation and enforcement efforts can reduce the risks of such accidents in just one decade by nearly ten to fourteen percent.

There are strong indications that a new strategy is developing in Russia within the legislative and institutional realms of emergency and disaster management policy and, in a broader sense, the national security system. Even if this new strategy can not yet be considered 'sustainable development' in international terms, it nevertheless has resulted in a more comprehensive concept of risk management. Even the best available and most efficient measures would not be able to completely eliminate all risks, but Russia's new strategy will help to reduce actual and potential risks.

In addition, such policy measures should be oriented to achievable and socially acceptable risk margins, which will perhaps vary within the vast territory of the Russian Federation. From a total of 89 Russian Federation entities, 27 entities (or 30.3%) have some sort of chemical, radioactive and other high-risk facilities. More than 700,000 people (or 0.5% of the total population in Russia) live in these areas. EMERCOM considers these areas to be the most hazardous regions in the country and thus are classified as Class I areas. Respectively, 33 entities (or 37.1%) are classified as Class II areas or "hazardous regions." Approximately 300,000 to 700,000 people (or ca. 0.2% to 0.5% of the country's total population) live

in such areas. In addition, 29 regions (or 32.6%) are classified as Class III areas or "less hazardous regions" (Akimov, Faleev and Shakhramanian, 1999).

This means that more than half of the country's population (living in roughly two-thirds of the Russian territory) is subjected to extremely hazardous conditions. These conditions are created by nearly 45,000 hazardous facilities which threaten public health and safety. These regions and communities should be given priority and should be in focus in the new emergency and disaster management policy at the regional level. At the same time, mitigation measures should be developed and implemented at the federal level, too. The Russian population, on average, has twice the risk of suffering from a natural disaster or technological accident in comparison to other industrialized countries. These concerns should be seriously considered. If properly implemented in the foreseeable future, the new emergency and disaster management policy would provide a more comprehensive national security policy for Russia and for more sustainable development in the long term.

NOTES

[1] This paper expands upon an earlier version by B. Porfiriev (2001) "Emergency and Disaster Management Policy in Russia: Institutional and Legislative Issues," Journal of Hazardous Materials. Vol. 88/2–3, pp. 145–167. Copyright " Elsevier Science Publishers.
[2] EMERCOM, Deputy Minister
[3] EMERCOM, Deputy Chief of the Center for Strategic Studies
[4] Institute for Systems Analysis, Russian Academy of Sciences
[5] For a cooperation between EMERCOM, the other practitioner organizations and academic community see Appendix 2, section Q2 in this chapter.

References

Akimov, V., Faleev, M. and Shakhramanian, M. (1999). Sravnitelnaia Otsenka Prirodnoi i Tekhnogennoi Bezopasnosti Regionov Rossii [Comparative Assessment of Russia's Regional Safety Against Natural and Technological Hazards]. In Dokladi i Vistupleniya na Mezhdunarodnoi Konferentsii 'Tsivilizovannii Biznes kak Faktor Ustoichivogo Razvitiya', 18–19 Noiabria 1998 goda, Moskva [Proceedings of the International Conference 'Civilized Business as a Sustainable Development Factor'. 18–19 November 1998, Moscow]. pp. 372–384. Moscow: Noosfera.

Federalnaia Tselevaia Programma "Snizheniye Riskov I Smiagcheniye Posledstvii Chrezvichainikh Situatsii Prirodnogo I tekhnogennogo Kharaktera v Rossiiskoi Federatsii do 2005 goda. (1999) [The Federal

Target Program for Risk Reduction and Mitigation of Natural and Technological Disasters in the Russian Federation by 2005]. Moscow: EMERCOM.

Fedulov, G. (1998). Perspektivi Razvitiya Zakonodatelstva Grazhdankoi Zaschiti. Chast 1. Prarovoye Obespecheniye Predouprezhdeniya Chrezvichainikh Situatstii [Civil Protection Legislation: Development Prospects. Part I. Emergency Prevention Legislation]. *Problemi Bezopasnosti Pri Chrezvichainikh Situatsiak*. No 4, pp. 3–37.

Fedulov, G. (2000). Perspektivi Razvitiya Zakonodatelstva Grazhdankoi Zaschiti. Chast 1. Prarovoye Obespecheniye Likvidatsii Chrezvichainikh Situatstii [Civil Protection Legislation: Development Prospects. Part II. Emergency Response and Recovery Legislation]. *Problemi Bezopasnosti Pri Chrezvichainikh Situatsiakh*. No 2, pp. 54–67.

Gosudarstvennii Doklad o Sostoianii Zaschiti Naseleniia I Territorii Rossiiskoi Federatsii ot Chrezvichainikh Situatsii Prirodnogo I Tekhnogennogo Kharaktera v 1999 Godu. (2000) [The 1999 Government Report on the State of the Population and Regional Protection Against Natural and Technological Emergencies in the Russian Federation]. *Problemi Bezopasnosti pri Chrezvichanikh Situatsiakh*. No 5, pp. 4–171.

Porfiriev, B. (1998). *Disaster Policy and Emergency Management in Russia*. Nova Science Publishers, New York.

Porfiriev, B. (1999). "Emergency and Disaster Legislation in Russia: The Key Development Trends and Features." *Australian Emergency and Disaster Management Journal*. Vol. 14, No 1, pp. 59–64.

Quarantelli, E.L. (Ed.). (1998). *What is a Disaster? (Perspectives on the Question)*. Routledge, London and New York.

Appendix 1
The Subprogram Measures on Risk Reduction and Mitigation for Natural and Technological Disasters Targeted for 2005

Subprogram 1

1. Development of a draft of "The National State Policy for Disaster Risk Reduction in the Russian Federation."
2. Development and implementation of legislation and directives for disaster risk management.
3. Recognition and implementation of a system for setting disaster risk standards.
4. Development of the concept of compound risk management and legal support for the Russian regions regarding the regulation of disaster risk reduction and mitigation.

5. Development of legislation for restricting ships which do not meet the safety standards as a means of preventing accidents at the sea.
6. Development of state standards for emergency and disaster monitoring, forecasting and damage assessment.
7. Development and implementation of legislation for assessing the health of people in areas affected by disasters, and calculating the amount of social damage incurred.
8. Improvement of the legislative foundation which oversees the allocation of financial compensation to people affected by disasters.
9. Development and implementation of legislation for assessing the economic effectiveness of investments made in disaster prevention, risk reduction and crisis mitigation.
10. Development and implementation of a legislative foundation and directives for disaster insurance and reinsurance.
11. Development of recommendations for organizing the state's regulation of risks for disasters and major technological accidents.

Subprogram 2

12. Development and implementation of a legislative foundation for identifying hazard and disaster risk agents.
13. Preparation and systematization of hazardous facilities and hazard evaluations for a potential major railroad accident.
14. Development and implementation of methods for assessing the risks of a natural and technological disaster occurring at or near nuclear/radiation facilities.
15. Development and implementation of methods for risk evaluations concerning technological accidents and disasters.
16. Development and implementation of methods for assessing the probability (using statistical data on technological incidents) and the consequences of an accident at a fuel or energy plant.
17. Development and implementation of a legislative foundation for assessing the probability of an emergency or a disaster.
18. Development of methods for assessing the probability of an epidemic or an epizootic.
19. Development and implementation of methods for risk evaluations about how human health is affected by phenol (a byproduct of shale mining) and underground potable water contamination

20. Development and implementation of methods for risk evaluations concerning how human health affected by accidental environmental pollution in the Russian Federation.
21. Improvement and implementation of methods for environmental risk assessments during an emergency or a disaster.
22. Development and implementation of sociological methods used to conduct a risk perception survey for evaluating the social impact of an emergency or disaster.
23. Development and implementation of a legislative foundation for evaluating the economic damages incurred by the social and ecological impacts of an emergency or disaster.
24. Development of a system with integrated indicators for emergency and disaster risk assessments.
25. Development and implementation of a legislative and methodological foundation for evaluating and comprehensively analyzing emergency and disaster risks.
26. Development of a set of measures for hazard identification, risk evaluation and risk reduction at industries dealing with hazardous materials.
27. Development and implementation of a legislative foundation for risk evaluation at fuel and energy plant sites.
28. Development and implementation of a legislative foundation for risk evaluations and recommendations for risk reduction at facilities managed by the Russian Ministry of Defense.
29. Development and implementation of a legislative foundation for assessing the risks and consequences for human and environmental health of an emergency or disaster at a nuclear/radiation facility.

Subprogram 3

30. Development and implementation of forecasting methods for natural disasters and technological accidents.
31. Development of forecasting methods for determining the risk of a natural disaster.
32. Improvement of the unified state automated system for emergency and disaster monitoring and forecasting.
33. Modernization of air and satellite systems for monitoring high-risk areas.

34. Organization of a network of centers (founded upon the EMERCOM regional centers) for regional emergency/disaster monitoring and forecasting.
35. Development and implementation of a geo-ecological monitoring system for areas with increased levels of karst (limestone) development.
36. Development and implementation of a geo-ecological monitoring system for areas with increased levels of environmental pollution.
37. Modernization and implementation of regional forest fire monitoring and forecasting.
38. Development of a system for monitoring, forecasting and making risk evaluations of sea accidents.

Subprogram 4

39. Development and implementation of a set of information support measures for automated information and control systems for emergency medical care used during emergency response.
40. Development and implementation of a set of information support measures for USEPE.
41. Development and implementation of software and technical support for monitoring hazardous nuclear and radiation sites.
42. Development and implementation of information technologies providing the public with chemical safety during an accident at an industrial facility.
43. Modernization of the automated centralized warning system for the Russian population.
44. Modernization and implementation of a communication system for confidential communication between the federal and the regional executive authorities responsible for emergency response and recovery.
45. Development and implementation of a USEPE warning system.
46. Development of risk maps indicating the areas with the most dangerous human, animal and plant diseases.

Subprogram 5

47. Development and production of protective equipment and medicine for emergency medical personnel and for people working at hazardous facilities.

48. Development and implementation of methods and means for the prevention and reduction of the risk associated with missile components falling from space.
49. Development of technologies and equipment for eliminating accidental oil and oil product spills.
50. Development of a set of measures providing public safety in areas located near nuclear, radiation and hazardous chemical sites.
51. Development of measures providing urgent support for the public's basic needs during an emergency or disaster.
52. Development of urgent measures providing individual protection, medicine and other safety items to the general public and to the USEPE units.
53. Development and modernization of radiation control devices for safety management in radioactively contaminated areas located in the Russian Federation.
54. Development of a safety control and alarm system for railroad transportation units.
55. Development of a mobile robotic and aviation system for emergency response.
56. Improvement of emergency search and rescue forces conducting response operations at sea and on waterways in the Russian Federation.
57. Development of means and methods for locating chemical waste sites and eliminating the consequences of chemical accidents.
58. Development of USEPE mobile command and control centers at the federal and regional levels.
59. Development of a set of measures providing technological integration of on-duty dispatch services in urban areas.

Subprogram 6

60. Development of a set of measures for training USEPE specialists for emergency prevention at the federal and regional levels.
61. Organization of a training center for USEPE surveillance and laboratory control units.
62. Organization of federal and local TV and radio broadcasting on emergency/disaster risk reduction and mitigation issues.
63. Publication of manuals for training emergency specialists in risk management.

Appendix 2
Civil Crisis Management in Russia: Bridging the Gap Between Research and Practice[20]

Q1: To what extent is the systematic knowledge of civil crisis management accumulated and disseminated in your country (Russia) and how?

The existing information network for accumulating and sharing data about crises and crisis management in Russia is relatively new, less than one decade. Before that, the official ideology existing in the former Soviet Union presumed that crises were "atypical" in socialist countries and "nonexistent" in communist countries. Thus the accumulation and dissemination of systematic knowledge on civil crises and crisis management was classified as 'confidential' or 'restricted access.' Such data was accumulated, studied and shared among a limited number of research institutions and practitioners, and was only published in special professional journals with a small circulation. It was first when the Chernobyl accident and then the Spitak earthquake hit that the situation changed drastically and gave rise to the establishment of a modern information network in the field of civil crises and crisis management.

Within this network, systematic knowledge is accumulated by using a flexible organizational approach and a mixture of centralized and decentralized methods for collecting, processing and disseminating data. Such tasks are carried out by information centers and research institutions under the auspices of a few federal ministries and departments which are responsible for dealing with various types of crises.

Today, the collection and processing of data on non-conflict crises and crisis management is primarily the prerogative of EMERCOM, while conflict crises and crisis management is principally the responsibility of the Ministry of Internal Affairs (MIA). The accumulation and sharing of systematic knowledge on compound crises (i.e. crises occurring simultaneously) and crisis management (e.g. environmental crises, epidemics and so on) are the shared governance of EMERCOM, MIA and a few other federal departments. In particular, these involve the information and research institutions of the State Environmental Protection Committee (since 2000 it is a department with-

[20] This questionnaire was filled in by Prof. Boris Porfiriev at the ÖCB/CBSS Workshop on Civil Security and Crisis Management in Stockholm (March 18–19, 1999).

in the Ministry for Natural Resources), Ministry of Health, Ministry of Agriculture and a few other governmental bodies as well as several academic research organizations.

In order to collect field information, the aforementioned organizations use complex networks. These include national environmental monitoring networks for warning and monitoring environmental accidents, national seismological monitoring and forecasting networks (used to detect and respond to crises provoked by earthquakes), special national monitoring networks (to warn and cope with chemical accidents and radiation), and so on. In addition, the information network of the MIA involves tens of thousands of militia stations and hundreds of thousands of people from the Armed Forces to collect data concerning civilian matters. This data is then processed at local analytical departments and stored electronically as data banks in MIA regional and federal information centers.

All of the agents within the existing crisis information networks exchange research findings and operational data. Intrasystem exchanges are the most common because substantial problems arise with intersystem data exchanges (i.e. between various ministries and departments) for a variety of reasons: the complexity of the information involved, organizational pathologies, or obsolescent (or even the total lack of it) communication and data processing equipment. Such obstacles impede the effectiveness of emergency response operations and increase the economic damage incurred by crises in Russia.

Q2: Are there any joint activities planned or in progress between practitioners and the academic community? Is there a potential for enhancing inter-community cooperation between practitioners and scholars in this field?

Joint activities between the research community and practitioners are an organic component of civil crisis studies and crisis management in Russia. Cooperation is strongest between research institutions and operational services within any given ministry or department active in the area of public security. This is quite natural given the hierarchic nature of the organizational and financial relationships existing within the ministries. Here research institutions are often subordinate to the ministries and serve primarily as the operational components of the ministries. However, because of the economic slowdown in the early 1990s, the 'crisis' ministries (as many others) experienced a

shortage of funds and thus their research institutions become the first victims of financial cuts. This only weakened the intellectual potential of such institutions and the joint efforts made with practitioners in the area of crisis mitigation.

The situation becomes even more complicated and ambiguous when considering the cooperation efforts between academic research institutions and operational organizations. On the one hand, such cooperation exists in the form of bilateral agreements between specific representatives of the two communities and by using the existing federal programs as an organizational umbrella. Two examples of such programs are the federal R&D program on "Safety Support to Industries for Natural and Technological Risks" (active since 1991) and the "Federal Target Program for Risk Reduction and Mitigation of Natural and Technological Disasters in the Russian Federation for 2005." These programs have already brought together dozens of institutions from various academic and industrial research institutions, and from operational organizations from those ministries responsible for civil crisis management.

Yet on the other hand, these "crisis" ministries rely on their own research organizations much more than on the academic community for advice for several reasons. Thus, the academic community has become increasingly dependent upon scarce funding from the Ministry of Science and Technology. This ministry allocates resources to academic institutions for primarily fundamental research rather than applied research. As a result, the amount of potential cooperation between the academic community and practitioners is shrinking at the same time that the scope and effectiveness of their research activities are also decreasing.

Economic and financial crisis conditions are exacerbating the existing cleavage in cooperation between the two communities. In fact in 1997 and 1998 the federal safety program received less than a quarter of the funds earmarked by the central state budget. Nonetheless, the potential for enhancing cooperation between practitioners and scholars in the field of civil crisis management exists. Without going into too many details, two principal opportunities can be outlined.

One of these demands a much more intensive use of competitive selection mechanisms guided by a wider and a more heterogeneous team of authoritative experts. These experts should be knowledgeable

in and open to both academic activities and the work of practitioners, and understand that the best operational programs are those based upon concepts deriving from extensive academic research. The second opportunity requires increasing the involvement of international cooperation in civil crisis research and crisis management practice. In this specific area, the Multilateral Crisis Management Cooperation Initiative proposed by the CBSS should be fully implemented (see section Q4 in Appendix 2).

Q3: What types of crisis scenarios are prioritized for planning purposes (floods, terrorism, etc.)?

A comparative study between the civil crisis management existing in the former Soviet Union and in contemporary Russia reveals the gradual, although still insignificant, drift from the deterministic type of emergency planning (*posteriori*) to a more comprehensive one involving scenario development and proactive measures for dealing with crises. Federal programs for natural disasters and technological risks should prioritize risk and mitigation concepts as a basis for developing scenarios for non-conflict crisis planning. Meanwhile, the bulk of the federal programs for civil crisis issues are still oriented towards response-type scenarios rather than prevention and mitigation; whereas regional programs look a bit more balanced in this respect.

Certain crises are heavily dependent upon the origin and severity of the hazards involved. For example, in the northwestern part of Russia near the Baltic Sea region there are *oblasts* (administrative regions) with less than 700,000 people (or less than 0.5% of the country's total population) living in areas prone to natural disasters and technological hazards. In accordance to the existing EMERCOM typology, these are classified as Class II and Class III regions. The St. Petersburg *oblast* is classified as a Class I region, since it has a high risk for natural and technological disasters. A disaster in this area would automatically affect more people since it is more densely populated. The Kaliningrad and Pskov *oblasts* have the highest crime rates in the region and therefore are at a higher risk for conflict crises. So just within northwest Russia, there is a wide range of risks; some areas are more prone to non-conflict crises (i.e. natural and technological disasters) and other areas are more prone to conflict crises (crime, etc.). Thus, the strategies for civil crisis management in these areas greatly differ in terms of risks, responsibilities, resources and coping measures.

Q4: How can academics and policy makers in your country [i.e. Russia] contribute to strengthening the proposed Multilateral Crisis Management Cooperation Initiative?

Both policy makers and academic researchers in Russia can contribute to strengthening the Multilateral Crisis Management Cooperation Initiative by participating in the development and implementation of joint projects which directly involve security issues concerning the Baltic Sea region. In addition, there are some specify areas where Russian scholars can concretely and significantly contribute.

Academic studies in civil crisis management issues concerning national and international security (in particular, in northwest Russia and the Baltic Sea region) should be prioritized at the national level. The emphasis of such research should be increasingly focused on (a) compound crises (multiple crises occurring simultaneously) and (b) future crises (those types of crises which have never occurred before and therefore include unknown and unpredictable risk agents). Such crises place more demands upon the systems and multidisciplinary research. Increased demands upon research means that the research organizations must strengthen their institutional and financial status and their cooperative efforts with practitioners. This challenge is more or less directed to the Russian Academy of Sciences, since it is, and has been, the cornerstone for research in Russia for decades.

At the international level, Russian scholars need to intensify their collaboration with their colleagues and partners from the Baltic Sea states. Such cooperation should be both multilateral and multifaceted. Russian academics should be increasingly involved in international research teams including those established under the auspices of the CBSS and/or the EU commissions. Furthermore, Russian scholars should also serve as more active consultants to various international agencies and other operational organizations in developing and implementing projects and programs in the field of industrial and environmental safety, community protection, business continuity and other areas of civil crisis management.

As a part of these research teams, Russian experts can bring their experience and unique knowledge about centralized and transitional societies (which differ substantially from those in Western Europe) to the field of crisis management. Put into a comparative framework, such systematic knowledge would enable practitioners to draw valuable lessons for the European community as a whole and for the Baltic Sea states in particular.

Chapter 3
Types of Crises and Crisis Management Mechanisms in the Russian Media

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Introduction

The existing situation in Russia is increasingly interpreted by many analysts, lawmakers, administrators and politicians as a systemic and deepening crisis. Research findings reveal that Russia has exceeded or has closely approached the thresholds for a major national crisis according to a number of crucial social, economic, demographic and ecological indicators (Katastrofi, 2000: 14–15; Rossiya, 1997).

As never before, the Russian society needs in-depth methodological and empirical studies on crises and crisis management issues. However, the Russian research community has limited access to primary documentation and data on crises, accidents, and emergencies. This stems from Russia's persistent management practice which considers the non-formalized production and reproduction of norms, traditions and stereotypes to be more important than those documented. Likewise, many ministries and departments feel that they need to withhold information from outsiders.

For this reason, the mass media often serves as an important source of crisis information for the public. It provides data about failures in the economic, political and societal systems, although the presentation of this data is not always adequate. If these topical publications would be put together into a single file, they would serve as a crisis database providing for more focused policy analyses. Given this, we felt it would be fruitful to examine the available data published in Russian newspapers and professional journals in

order to categorize and classify the Russian press coverage of particular crises and crisis management issues.

The authors of this chapter determined two basic tasks and thus the study was divided up into two successive stages. In the first stage, as many newspapers and professional journals as possible were collected. Then an inventory of the publications was compiled of the events and issues which complied to the crisis concept used by the current authors. In turn, the inventory was used to create an empirical typology of ten specific crises. These cases were then analyzed in the second stage with a particular focus on crisis management issues.

It should be pointed out that the selected publications were not scrutinized within the sociology of mass media framework (which considers the media to be a social phenomenon) but rather as textual documents. This approach is actually a documentary study and builds upon the method of collecting sociological data (Giddens, 1993: 626).

Admittedly, sociology of mass media is most advanced in the United States, where quantitative measurements of press readership and radio, cinema and TV audiences were introduced as early as the 1920s. Laswell coined an aphoristic formula of the most generic type of mass media sociological research: "*Who* says *what* over what *channel* to *whom* and with what *effect*" (cf. Spravochnoye, 1986: 203). This classic formula has served as an outline for sociology of mass media research, and guides the analysis of the mass media, the audience and communication.

In this study we deliberately look at the Russian press not as a social phenomenon but rather as a specific set of publications similar to those documents published by government agencies. It is also worth mentioning here that Russian empirical sociology, both in the past and in particular now, has been underfunded and has repeatedly experienced a shortage of funds for data collection. Therefore, Russian sociologists have been more inclined to use newspaper articles, which often provide important documentation for analysis. Utilizing these materials as textual documents is quite effective considering the fact that in-depth empirical investigations are expensive.

Methodology

The researchers engaged in experimental and empirical studies believe that a wide range of data produces more reliable conclusions. Unfortunately, real life is much more complicated, and researchers are confined to making sample surveys. It is clear that data should be grouped or categorized in some way in order to enable an analysis of a specific research theme or period of time. This methodology was used to compile an empirical typology of the data presented by the Russian press on various crises.

First, a list of all of the daily and weekly publications (with at least 25,000 copies in circulation) and the monthly editions in Russia were compiled. Then using the 'orientation' criterion (i.e. the editorial policy of each publication – political orientation, party affiliation, etc.), all of the publications were classified into five groups: independent, trade unionist, pro-government, oligarchic, and communist/patriotic. From each of these groups, specific editions were selected based on certain criteria for in-depth analysis. The criteria included the following considerations:

- circulation (newspapers with high circulation),
- geographic coverage (federal newspapers distributed in both densely populated and more remote areas in Russia),
- popularity among various groups and communities, and
- a minimum number of publications from each of the five group so that the sample would be representative and comprehensive.

All of the daily, weekly and monthly newspapers/newsletters selected to be in the final sample are listed in Table 1. The time perimeter for this study was limited from September 1, 1999 to February 29, 2000. The daily newspapers were selected using the following method: the first and third weeks of the even numbered months, and the second and fourth week of the odd numbered months. The method was reversed the following month. Weekly and monthly newspapers as well as professional journals were studied in full and included all issues.

Table 1: List of Newspapers and Journals Included in the Sample

Name	Circulation	Orientation
Daily		
Moskovskiy Komsomolets*	219,457	"Independent"
Trud*	612,850	"Trade unionist"
Rossiiskaya Gazeta	436,892	"Progovernment"
Kommersant Daily	117,340	"Oligarchic"
Pravda*	65,700	"Communist/patriotic"
Segodnya	57,000	"Independent"
Weekly		
Argumenti i Facti*	2,830,000	"Independent"
Zavtra	100,000	"Communist/patriotic"
Novaya Gazeta	73,500	"Independent"
Monthly		
Sovershenno Secretno	582,700	"Independent"

* These newspapers existed before 1985 (i.e. before perestroika). The other newspapers (without a *) emerged after 1985.

Key Features of a Crisis

The research team used a unique understanding of a crisis for the empirical investigation. The existing interpretations and the main features of a crisis were considered (see Anatomiya, 2000; Antikrizisnoe, 1998; Chesnokov, 1991; Giddens, 1989; Rossiya, 1997; Shrivastava, 1993; Stern, 1999; Svedin, 2001; Tsennosti, 1991; Zondov, 1999). Various concepts of a crisis exist in different fields of research, teaching disciplines and practical applications such as: medicine, economy, engineering, political science, sociology and so forth. Each field centers on its core theme (natural or social science, organic or inorganic, abstract or concrete, etc.) and defines its own unique crisis stages and crisis development. Math provides the most abstract definition of a crisis: a moment of change in the development of programs for (or within) a system. The mass media focuses mainly on crises which affect the social system in the broad sense, and often provides empirical information on different types of crises.

Using these basic principles, a conceptual framework was developed and used to select and analyze events or occasions which were perceived as crises. According to our definition, an event is perceived a crisis when there is a breach in the social and/or organiza-

tional order, which threatens the existing social norms and values. A crisis can occur at the international, national or local level and can affect any number of groups (ex. community, social, demographic or professional).

Using this crisis definition and the aforementioned selected sample of the Russian press, an inventory was taken of the crisis events covered in these publications. This inventory evolved into a 120-page manuscript which was used in the first stage of analysis for building an empirical typology of crises (as depicted by the media). Three basic crisis types were investigated:

- **Crises processes** which develop in the main areas of society's routine activities.
- **Crises consequence**s caused by a major destabilizing or non-routine event like the war in Chechnya.
- **Crisis events** or emergencies, which call for immediate response or action.

The events of a crisis process constitute a crisis by definition, but they have not exploded into a full-blown crisis. The events have developed into a crisis scenario but have not yet reached the "boiling point" and may never do so. Some examples of crisis processes are: banking crises, business crises, production crises, energy crises, the contraband of national resources, and the flow of ethnic Russian refugees from the former Soviet republics.

A further analysis of crises as portrayed by the press resulted in a further subdivision of the types of crisis events:

- **Political and social crises** including terrorist acts (like the bombing of the residential buildings in Buinaksk, Moscow and Volgodonsk in 1999 and the ethnic conflicts in Karachai-Circassia in 1999).
- **Social and economic crises** including property conflicts and the problems associated with mono-industrial settlements. In particular, these include crises associated with the painful redistribution of property, for example: at the Vyborg pulp and paper mill, the Lomonosov porcelain plant in Leningrad region, the Kuznetsk metallurgical complex in Siberia, the Cheryomushki ceramic plant, the pharmaceutical complex in Moscow, Domodedovo airport, and the mono-industrial set-

tlements in Ivanovo and Karabash (see Chapter 6 in this volume) .

- **Industrial, environmental and food crises** like the poisoning incident at Verkhniaya Salda, the ecological disaster provoked by cyanide discharged into Dunai, or the uranium crisis in Uzbekistan.

Selection of Crises and Crisis Management Issues

At the second stage of the analysis, ten specific crisis events were selected from the collected data. Some events were discussed extensively in several newspapers while others were only mentioned sporadically. The selected cases were examined and the findings are presented in the second part of this chapter. These ten crisis events were compiled into an original typology by the current authors in accordance with the aforementioned criteria.

A specific procedure was used to analyze the data in each case study with particular attention given to crisis management issues. A brief description of the crisis event, the key crisis actors, the crisis sources, the crisis managers, the crisis agents and the crisis victims is presented. Likewise, the sequence of the decision-making steps for managing the crisis (including chronological data where possible) and the institutions involved in decision making are discussed. These included, for example, the Russian President and his administration, the federal assembly, various courts, the church, the Armed Forces, and the mass media. Lastly, the effectiveness of the crisis management is also considered.

It should be strongly underlined that the crisis management issues in the selected crises were not always so clear-cut and sometimes a bit ambiguous. These issues were reconstructed and redesigned using the descriptive, and often quite emotional, stories found in the Russian press. Given this, the current authors tried to find a more comprehensive source of information for each of the selected crisis events in professional journals and newsletters. This task proved to be quite difficult since many of these publications have very expensive subscription fees, which only a few libraries can afford. In fact, many of the universities and academic institutions do not have subscriptions due to limited funding. Therefore the analy-

sis was restricted to those sources (published in 1999–2000) which were accessible.

One valuable source was the journal *Problemi Bezopasnosti pri Chrezvichanikh Situatsiya*kh [*Security and Safety Issues in Emergencies]* which is issued six times a year. It highlights the general and specific safety and security problems in disaster management; the legal and organizational issues in civil protection and emergencies; quantitative risk assessments; technical and information support for rescue workers; statistical analysis of natural and human-made emergencies; and emergency and disaster forecasting. The journal's main focus is on industrial safety, in particular that of hazardous facilities.

Another helpful journal was *Vorosi Analiza Riska [Issues of Risk Analysis]* which has a circulation of about 1,000 and was first published in 1999. It discusses the theoretical, methodological and practical problems of risk analysis and of risk assessment. The journal analyzes the fatal risks of various kinds of economic activities; environmental safety in terms of radiation caused by industrial accidents; and the methodological and legal issues of risk. However, the main focus is on financial risks and various methods of quantitative assessment. Crisis and risk management issues are not explicitly addressed in this journal.

The journal *Upravleniye Riskom [Risk management]* was also utilized. It has a circulation of about 1,000. This journal contains both a scientific and popular approach to various kinds of risks and risk impacts (political, ecological, economic, human-made, health, stress, etc.). The publication analyzes the management of financial and insurance risks, and to a lesser extent considers political risks. The authors of the journal identify national crises, but they fail to critically analyze of the management of them. Instead they blame these upon the loopholes and shortcomings in the state policy.

To sum up, the analysis of the available professional journals revealed that crisis management issues (in particular, practical crisis decisions) are of little or no interest for the publishers. If considered at all, these issues are discussed in very broad terms and focus on the political and economic risks at the national or regional levels. Very little attention is given to how specific decision-makers deal with concrete crisis management issues.

Political and Social Crises

1. BOMBING OF RESIDENTIAL BUILDINGS IN MOSCOW

Description of the crisis – On September 8 and 13, 1999, two residential buildings in Moscow were bombed. The first explosion containing 350 kg of TNT killed 92 people (of which 12 were children), and 72 people were injured. The second explosion containing 250 kg of TNT killed 116 people (of which 8 were children), and injured 9 people.

This was a crisis since the values of personal safety, national safety, human life, human health and material wealth were put at stake. The crisis was aggravated since the respective authorities were not inadequately prepared, nor was the emergency response. Likewise, mechanisms for anticipating and preventing the second explosion had failed. In addition the respective authorities acted quite distant and removed after the bombings; sometimes they were even unprofessional. Their actions were more symbolic (awarding heroes) or auxiliary (cleaning the city of arms and drugs). They apparently did not have a sincere interest in coping with the tragedy or the will to implement better response activities. This occurred for one of the following reasons: the respective authorities lacked the competence and experience for dealing with such situations, or the respective authorities were trying to escape responsibility for the crisis.

Crisis actors – The crisis was allegedly organized and executed by a terrorist group (the so-called Chechen Path Version) or by the Russian special services as some newspapers claimed. The crisis victims were those directly affected by the bombings – the residents of the blasted buildings and those who happened to be in the area when the explosions occurred. The crisis managers were the city and federal authorities.

Management of the crisis – The alleviation measures taken by the authorities after the first and the second bombings were those aimed at solving the most acute problems for the displaced residents and the investigation. The crisis management measures after the first bombing (September 9, 1999) focused on helping the victims and the investigation. The police searched for witnesses, and the rescue workers assisted the victims. Experts from the Federal Security Service were able to identify the location and type of bomb. Several

hot lines were opened for providing information to the public about the casualties. However there was no central information center even after the second bombing.

On September 10, 1999, President Yeltsin announced a day of mourning for those killed in the explosion. None of the officials or journalists mentioned the threat of a second bombing.

After the second bombing, urgent response measures were taken. Prime Minister Putin ended his visit in New Zealand and immediately returned to Moscow. He made a public statement. First of all, Putin expressed his condolences to the victims and their families, and promised that no one would lack support or attention. Secondly, he said that if a connection existed between the terrorist attacks in Dagestan and Moscow, the Government would regard the terrorist bombings as an act of aggression and would use all available means to extinguish it. This justified the Government's right to use whatever means necessary for self defense.

The Mayor of Moscow (Y. Luzhkov) imposed special security regulations in the city including: tightened passport control, checking of cars and trucks on all main roads; registration of all incomers into Moscow, total control over all abandoned goods at surface transport, and police reinforcement in the subway. Likewise, all of the city hospitals were placed under a state of emergency (physicians could be called at any moment irrespective of their schedules), and a hot line was installed at the city's Head Office for Combating Organized Crime for receiving calls about suspicious behavior.

On October 21, 1999, the President of Russia signed a decree awarding the title of "Hero of Russia" to EMERCOM Minister Shoigu and medals were given to the EMERCOM rescue team.

In the beginning of October, the Moscow city police started the operation called "Whirlwind Anti-Terror" which included the following:

- The district police officers held meetings with the local residents in order to give them instructions on how to act if explosive material was found. There were 80,000 such meetings.
- More than 4,500 Muscovites were charged with illegally renting their apartments.
- The status of about 86,000 people was checked, and half of them had come to Moscow illegally.

- More than 2,000 people were suspected of committing various crimes (including the illegal possession of firearms, explosive materials, and drugs) and 126 people are taken into custody.
- Alleviation of the long-term consequences of the bombings (specifically those for the displaced residents).

Many other problems surfaced after the bombings. Many of the Moscow residents lacked the financial means to repair their apartments which were damaged by the bombings. Furthermore the fire destroyed many necessary documents. The residents were promised an allowance of 2,000 rubles and a compensation up to 75 rubles after the evaluation commission finished its job (1 US$ = 27 rubles). Despite the fact that many of the residents had insured their apartments, the court turned down their claims and this decision could not realistically be challenged. It was not clear whether this decision affected only those who owned their apartments, or also those who lived there but had not registered ownership. The officials suggested that these individuals "should take their claims to the terrorists."

Prior to the bombings, the apartment buildings of 76 families in Pechatniki (the site of the first bombing) had been privatized free of charge according to a new federal law, but this law enabled only one free transfer of ownership. This meant that if the person who signed the contract died or if the appropriate documents could not be produced, the victim's family could lose ownership and automatically become renters since the new law had not taken these issues into consideration. One Moscow Duma Deputy suggested an amendment to this federal law which would permit one transfer of ownership free of charge if the existing apartment was lost due to unforeseeable or unavoidable circumstances (such as a natural disaster or a terrorist attack). However, the federal authorities still have not passed this amendment yet and nobody knows when it might happen. There is no foreseeable solution to this problem as of yet. This issue will most likely be suspended and pushed aside since "nobody is lacking support or attention."

The aftermath of the bombings focused on the problems of the investigation. The culprits of the explosions have not yet been apprehended. Speculations on this topic in the more radical newspapers (such as *Moscovskiy Komsomolets*, *Segodnya*, *Argumenti i fac-*

ti and *Kommersant)* have suggested that the federal authorities are not interested in the investigation since the special services were involved in the terrorist attacks. These newspapers have cited anonymous representatives from the military and from the industry world, who argued that the amount of explosives (13 tons) used for the bombings could have only been obtained with the help of high-ranking people. The origins of the explosives were confirmed by the Head of the central office for Combating Organized Crime within the Russian Ministry of Interior. In addition, the claim that Chechen rebels were involved has also been questioned since some analysts believe that such an attack would have required at least 4–5 months of planning (i.e. sometime in the spring of 1999 before the Chechens had even entered Dagestan).

Lastly, the newspapers also cited the President of Georgia, E. Shevarnadze, who apparently made a TV statement on November 15, 1999 saying, "I informed Yeltsin at our Kishinev meeting that his special services were in contact with Chechen terrorists. But it seems that Russia doesn't want to listen to its friends."

Four months after the bombings, the press criticized the responsible agencies for not finding the criminals yet. According to the Deputy Director of the Anti-Terrorist Department (of the Federal Security Services), the law enforcement bodies were unsatisfied with the results of their work since they "didn't manage to prevent the bombings in Moscow, Volgodonsk and Buinaksk. The head organizers and perpetrators are still free."

Effectiveness of the crisis management – The crisis management decisions taken could be characterized as auxiliary (i.e. not of primary importance), reflexive, and a posteriori, since the crisis managers were incapable of foreseeing and preventing the second bombing. The authorities have not kept their promises they made immediately after the tragedy. The publications in our sample claimed that the culprits and the victims of the tragedy were soon forgotten in the pile of new crises.

2. ETHNIC CONFLICT IN KARAHAI-CIRCASSIA

Description of the crisis – On September 4, 1999, a conflict started between the followers of Stanislav Derev (the mayor of the town of Circassk who had lost the presidential election for the Karachai-

Circassian Republic) and the supporters of General Vladimir Semenov (the winner of the election). The two main ethnic groups, the Karachais and the Circassians, found themselves at opposite ends: the Karachais and Russians supported Semenov, and the Circassians voted for Derev. The defeat of Derev inspired his advocates to demand that the region of Circassia withdraw from its existing entity and establish its own autonomous republic. The situation was complicated by the fact that Valentin Vlasov (the acting head of Karachai-Circassia before the elections) had not been formally dismissed from his position according to the President's Decree. This just put more fuel on the fire for the Derev supporters.

This situation could be perceived as a crisis in two regards. On the one hand, it was a long drawn out regional conflict with strong ethnic tensions instigated by the federal authorities' sluggish response and incompetence. In other words, this was a crisis stemming from misused time and opportunities. On the other hand, the situation threatened the basic values of the region and its residents (i.e. the democratic system, security, and life).

Crisis actors – The mayor of Circassk and his followers can be considered the source of the crisis. One could even suggest that the fiasco during the elections led to a personal crisis for the mayor, which significantly increased the severity of the crisis (namely, the inter-ethnic relations).

The crisis victims were, first of all, the citizens of Circassk, and then the crisis spread throughout the entire region of Karachai-Circassia. Semenov's part in the crisis is not so clear. If one shares the view of the Russian parliamentarians, who considered the elections to be corrupt, then General Semenov should be regarded as the indirect source of the crisis. However, he suffered personally as well. The federal authorities most likely were both a source and a victim in this crisis.

Chronology – On September 3, 1999, a gang of youngsters attacked a group of older Karachai men praying in the center of Circassk with batons and rods. Reportedly 14 people were injured of which 11 had to be hospitalized. The police immediately started on a search for the young men.

On September 4, 1999, tension in Circassk increased between the Derev supporters and the guards at the electoral headquarters in Semenov. One of Derev's brothers broke off the negotiations with

the opponents saying, "You [Semenov supporters] don't deserve to be treated the same." Semenov's followers replied with "If even a single hair falls from the head of someone in our electorate, then a lot of Circassians are going to lose their heads."

Derev's brother led a crowd of 200 people, including two police officers armed with Kalashnikov machine guns, into an open confrontation with the Semenov supporters. The police officers started firing and eight people were injured, some of those very seriously.

On the night of September 6, a cafe owned by a Karachai was set on fire. Several unidentified people shot at a watchman who tried to extinguish the fire.

Despite the fact that Semenov had won the elections, he could not terminate the Acting Republic President's duties since the government building was being blocked by the demonstrators. The demonstrators were demanding the establishment of a separate Circassian Republic and their own government. Almost 60 Derev supporters in the Karachai-Circassian government declared their withdrawal from the existing executive body. A delegation of Balkars came to Circassk and endorsed the resolution to the Prime Minister and the President of Russia. The delegation declared that the Balkars were ready to leave their native Kabardino-Balkaria and join the newly established republic of Karachais.

On September 10, 1999, the Slavic community organized a meeting in Circassk in order to support Semenov as the legitimate head of the Karachai-Circassian Republic.

Management of the crisis – It took the federal authorities a long time before they intervened; they were waiting to see what would happen next. The Kremlin had advised Semenov to agree to a meeting with Derev as a sign of goodwill, since the Prime Minister had come to the republic with no real alternative.

The General Prosecutor of Russia suggested to wait until the Supreme Court of Russia made a decision on the new appeal put forth by Derev advocates, but Semenov disagreed. Semenov believed that any attempt to postpone the decision to the unknown future would only escalate the situation in the republic.

Negotiations between the Derev and Semenov supporters eventually took place in Moscow, and the participants called a stop to the conflict.

On September 22, 1999, the Chief of the Presidential Administration (A. Voloshin) met in Moscow with representatives from the Russian and Nogai communities in Karachai-Circassia. A decision was then made to organize a federal commission to resolve the conflict.

On September 23, 1999, General Semenov's assistant was assassinated by an unidentified man. On the same day Derev's advocates organized a new meeting and demanded the dissolution of Semenov's post since Vlasov could not leave his post as Acting President of the republic without a verdict from the Supreme Court or a President's Decree; both of which were still missing. At this meeting the people expressed their resentment towards the federal authorities who refused to send a commission to consider the problems of the republic in spite of an earlier verbal agreement reached between Putin and Voloshin.

Meanwhile, Semenov's advocates wanted the Karachai-Circassian police (who were subordinate to the federal government) to break up the demonstrators. However, the Interior Minister of Karachai-Circassia, Alexander Volkodav, said that he would not use force against the demonstrators.

The federal authorities were inconsistent. On the one hand, the head of the President's administration promised Derev that Semenov would only continue to work for 45 days in the Ministry of Agriculture building not in the President's residential building. On the other hand the Prime Minister confessed to Semenov his discontent with the Circassians, who promised him that they would actively participate in the organization of the republican government but instead organized demonstrations and protests.

On September 24, 1999, the Russian President signed a decree dismissing Vlasov from his post as the Acting President of Karachai-Circassia. This decision cushioned the emotional tension in the republic. The Republic's Minister for the Interior at last succeeded in getting the Circassians and the Abazins to a spontaneous meeting outside the central square of Circassk.

On October 18, 1999, on the eve of the Supreme Court session, Semenov prohibited all meetings and demonstrations in the republic. This provoked fury in the democratic press.

On October 21, 1999, the Supreme Court of Russia approved Semenov as the legal and legitimate head of Karachai-Circassian Republic.

On October 23, 1999, Semenov, Derev and Putin agreed that Semenov would remain the head of the republic for one year. Then at that time, October 2000, a referendum would be held to confirm his authority. In total, it took seven months for the federal authorities to reach this fragile compromise in Karachai-Circassia.

In October 1999, a delegation of the State Duma came to Circassk. This indirectly implied that they felt the elections in the republic were fraudulent. Semenov would have won anyway since the Karachais outnumbered the Circassains. The level of hostility between the two communities reached a critical point. According to the newspapers, the crisis had deep historical roots and had not been caused by differences in living standards or by Semenov personally.

The Russian-speaking community lacked any real influence in the conflict since the community did not have a strong leader. In fact the Russian-speaking community was actually torn between the two other ethnic communities during the conflict.

During the Karachai-Circassia conflict, each side wanted Moscow as its ally. Concerns were raised that similar conflicts would cross into the other regions and spark similar ethnic conflicts. It was feared that the Kabardins would join the Circussians and the Balkars would gang up with the Karachais, which result in another ethnic conflict.

Effectiveness of crisis management – The situation in Karachai-Circassia could be characterized as a temporary solution which cushioned, but did not resolve, the crisis.

3. ULTIMATUM FOR THE RESIDENTS OF GROZNY

Description of the crisis – In December 1999 an anti-terrorist operation in Chechnya was declared. Russian federal troops were given the task of forcing the bandits out of Grozny, the capital of the Chechen Republic. All of the Grozny residents were to receive an ultimatum to leave the city by December 11, 1999. The terms of the ultimatum were explained in a leaflet. The ultimatum leaflets were to be distributed by an airplane to all of the residents, but the wind

blew them to the uninhabited district of Grozny (Zavodskoi) leaving most of the city's residents unaware of the ultimatum.

Under such circumstances, any type of bombing would result in the massacre of innocent civilians. Therefore, serious concerns were expressed by the Russian and international public, the mass media, and various organizations. The emerging crisis demanded an urgent resolution.

Crisis actors – The crisis victims were the Grozny residents. The ultimatum threatened their fundamental values of personal safety, housing and property. The crisis source is difficult to identify since the body or agency responsible for issuing the ultimatum remains unknown; it was either issued by the federal authorities or the federal military. Nevertheless, the federal level could be regarded as a crisis source and a crisis victim since the ultimatum was severely criticized by the world community, which threatened to issue economic sanctions against Russia.

Chronology – On December 6, 1999, federal troops dropped the ultimatum leaflets over Grozny in an attempt to encourage the residents to leave the city by December 11. Promises were made to those who left the city willingly; they would receive food, shelter, and medical services, and would not be killed. In the leaflets there was a warning to the rebels, "You are encircled and all the roads to Grozny are blocked. You have no chance! It is useless to keep fighting!"

The 30,000 residents were instructed to leave the city through specially designed corridors and would then be resettled in camps near the village of Znamenskoe. Everyone who followed these instructions was guaranteed constitutional rights and the possibility of returning home immediately after the operation. Those who refused to leave Grozny after the deadline would be subjected to air fire.

The official statement claiming that the federal troops' mission was to protect the residents is questionable. It was hypocritical for the federal authorities to claim that the troops would not assault Grozny and that they just wanted to "squeeze" the rebels out of the city.

The authorities largely neglected the concerns and interests of the Grozny residents. First and foremost, the bulk of the civilian residents failed to receive the information in the leaflets. In addition, many of the Grozny residents were older and could hardly walk 15 km to the designated corridors. Moreover, those who wanted to leave the city were stopped by the rebels. The rebels tried to prevent

the residents (especially the elderly) from leaving the city so they could use them as living shields. Many people were also reluctant to leave their houses because they were afraid of looting. Others feared that they would have no home to return to after the bombing and artillery attacks.

On December 7, 1999, a group of Grozny residents reached the regional center of Achkhoi-Martan and requested an extension of the ultimatum knowing that not everyone had read the leaflets. However, the military generals assured them that all of the Grozny residents were aware of the ultimatum. The world community sharply criticized the ultimatum. The US President (Bill Clinton) warned Russia that it would lose its position in the international arena if the ultimatum was implemented. The President of France (Jacque Chiraque) called the ultimatum "unacceptable." The British Foreign Affairs Minister summoned the Russian Ambassador in London to an urgent meeting to discuss the actions of the Russian troops in Chechnya.

At the same time, the first minor economic sanctions were imposed against Russia. The International Monetary Fund Board of Directors refused to specify a date for considering the issue of providing a loan to Moscow before the ultimatum was dismissed.

Management of the crisis – One can hardly speculate now what exactly caused the federal authorities to call off their plans. It could have been the world community's reactions to the issue or the fear of provoking negative public opinion among the Russians voters before the Duma elections. However, one thing is sure – Grozny was definitely a trump card for some of the political movements during the parliamentary election campaigns.

As a result of the termination of the ultimatum, the combat mission in Chechnya was changed. The federal troops were sent instead to reinforce positions in the territory seized in the eastern suburbs of Grozny to fight the rebels there.

The effectiveness of the crisis management – It is hard to properly assess the effectiveness of the measures taken to cope with this crisis given the fact that the crisis source and crisis victim ended up being one and the same (i.e. the federal government). It is true that the federal bodies reconciled the dispute but this was to a great extent done because of strong international pressure and criticism from the democratic movements in Russia.

Social and Economic Crises

4. PROPERTY REDISTRIBUTION AT THE VYBORG PULP AND PAPER MILL

Description of the crisis – The Vyborg pulp and paper mill (PPM) is the cornerstone for social and economic life in town of the Sovietskoe in the Leningrad region. Over the past two years, the plant owners have made two attempts to sell it to foreign companies. However, both times the PPM workers protested heavily upon hearing that the new owners were planning to cut and partially replace the PPM workers. In October 1999 a clash occurred between the mill workers and the urgent response police units (the so-called spetsnaz) who the owners had contracted to keep the workers under control.

This conflict conforms to our criteria of a crisis. First of all, there was a clear threat to the mill workers' basic values (more specifically, gainful employment, and livelihood). Secondly, both the PPM owners and the regional authorities poorly managed this dispute, which eventually evolved into a violent conflict with armed weapons.

Crisis actors – The new owners of the mill (first Cypriot then an English company called ALCEM), the PPM workers and the so-called "People's Director" (a representative elected by the workers) were the primary crisis actors. The new owners were the crisis victims and the People's Director was the crisis source since he instigated the workers to oppose the owners despite the fact that the workers had wavered their right to make decisions when they sold their shares to the plant owners.

One actor who should have been involved in the crisis, but did not, was the regional administration of the Leningrad region. The regional authorities distanced themselves from the PPM problems and ignore them for two years. This policy of non-interference actually aggravated the crisis and to a great extent provoked the violence. Thus, the regional administration could be considered as the indirect or secondary crisis source. The Sovetskoe residents who were employed as strikebreakers by the new owners were also a crisis source.

Secondly, another potential crisis actor, who also failed to step in, was the federal government. The federal government has a policy

of distancing itself from any serious conflict regarding property (re)distribution. For instance, the federal government kept quiet when the Governor of Krasnoyarski region (Alexander Lebed) tried to use force to resolve a conflict at the Achinsk aluminum plant in Siberia shortly before the events in Vyborg. Such conflicts provide the advocates of a state-planned economy and the leftist politicians an opportunity to call for the nationalization of some industries. Such politicians, as well, could be regarded as potential actors in the Vyborg crisis.

Chronology – In the beginning of 1998 the former English owners (Cypriots) of the plant announced a forthcoming cut in the workforce because of a serious slowdown in production. This gave rise to a conflict. The plant workers organized a strike committee and elected a "People's Director," who declared that the workers should be able to keep their right to make decisions despite the fact that the workers had sold their shares to the existing owners (Cypriots). The workers went so far as to deny the Cypriot shareholders access to the plant premises. By the end of 1998 the People's Director managed to increase production at the plant (or more accurately put it back into production) and increased the workers' salaries. However, the funds used to cover the payroll actually came from a commercial bank credit issued on very unclear terms and shaky conditions.

In spring 1999 the Cypriots owners sold the plant to ALCEM. The new owners reregistered the pulp and paper mill, and changed its name and status. The old stock company was transformed into a public stock company called "Vyborg Cellulose." In the summer, the bailiff of the Leningrad region ordered the closure of the plant, but the workers denied the authorities access to the plant's premises.

On the night of October 10, 1999, the Regional Deputy Prosecutor and the PPM co-owner entered the plant with the assistance of 30 members of the "Taifun" *spetsnaz* unit from the Law Enforcement Department. They made their way to the administrative office. This action was secretly planned by the Law Enforcement Department and the Chief Officer of the Interior in the Leningrad region. The plant workers on duty (up to 100 workers) refused to let them in the administrative building. Shots were fired. Two workers were slightly injured and the plant co-owner was taken hostage.

By morning all of the plant workers were on-site. The police encircled the plant. The regional administration started negotiations with the strike committee while the Governor of the Leningrad region appealed to the federal government to activate the responsible agencies. The federal government did not do or say much more than "do not relinquish privatization."

Almost a month later in November 1999, the then Minister of Labor and Social Development (Serguei Kalashnikhov) came to the plant. He was in favor of searching for a compromise: a legal basis for providing the workers the right to contest the issue of property ownership/governance but only in the court of law. A hearing in the arbitrage court was scheduled for January 20,2000. In the Minister's opinion, if the owner's rights were confirmed, the situation would explode and would get totally out of control. Therefore he proposed to sign an agreement with the British company on transferring the trust management to the administration of the Leningrad region, which could consider the owners' interests.

In late November, labor union representatives from all over Russia gathered at PPM in Vyborg to support the protests against the privatization process which they regarded as illegal. The labor union representatives had a meeting and exchanged their experiences on non-subordination.

On December 10, 1999, the arbitrage court held a session and delivered a sentence in favor of the owners. The PPM workers signed a letter of mistrust to the former People's Director and applied for jobs in the new public stock company Vyborg Cellulose. After they were paid an advancement of 1,000 rubles. The new owners committed themselves to keeping as many jobs as possible. Thus, the PPM crisis was resolved.

The effectiveness of crisis management – The crisis started due to the regional (Leningrad region) and federal authorities' negligence and indifference to the problems of private property and ownership rights. Similar conflicts have popped up before and thus should not be considered unique. However, none of the responsible agencies had executed effective crisis planning or utilized crisis management in good time. As for the urgent crisis response measures, the federal government did not have any real specific tools or means prepared for solving the problem. The proposal from the Minister of Labor could hardly be regarded as acceptable either.

An effective approach would have included early crisis planning (conflict mediation and reconciliation) with the regional authorities, the trade unions, experts in labor relations and property issues, and the plant owners. Crisis events like the one at PPM are becoming more commonplace in Russia. This disturbing trend highlights the need for better crisis prevention and crisis management in Russia.

5. CRISIS AT DOMODEDOVO AIRPORT

Description of the crisis- Domodedovo Airlines is one of the Russia's main airlines. It transports the largest share of national air cargo and serves almost 70% of all commercial flights to the Far East (with some regions having no other service). Canceling just a few flights could provoke a serious crisis.

On January 19, 2000, the Ministry for Taxation and Fees blocked all of the company's accounts and suspended all of its payments for fuel, airport fees and navigation services. As a result, several flights were cancelled and many people were stranded at the airports; they could not reach their final destination nor could they get a refund for their tickets. The Ministry for Taxation and Fees imposed sanctions against the company, which had acquired a debt of 16 million rubles to the federal budget. However, the federal budget was indebted to the company (for VIP passenger transportation) 200 million rubles with some sources claiming even up to 230 million rubles.

This situation could be regarded as a crisis since at least several hundred people were affected and they lost a considerable amount of time and money. Though life values were not threatened, social and legal norms were disturbed when the passengers failed to reach their destinations. Domodedovo Airlines did not provide them with lodging and none of the hotels would provide credit to the stranded passengers. The passengers could not refund their tickets, so they had to just wait and press the airline staff hoping that the crisis would soon be resolved.

The crisis actors – The newspapers provided little data on the crisis actors. The source of this crisis was the federal government: in particular, the Ministry for Taxation and Fees, which blocked the airline's accounts. Likewise, the federal agencies played a part in causing the crisis since they had not paid back their debt to Do-

modedovo Airlines in time. In turn, the company could hardly be considered just a crisis victim since it failed to pay its taxes in time. Thus Domodedovo Airlines could be regarded as both a crisis source and a crisis victim. Every passenger scheduled to fly with Domodedovo Airlines at that point in time was definitely a crisis victim.

One more specific crisis actor could be the administration of Domodedovo Airlines. On February 28, 1999, the company should have started a privatization process, but apparently somebody did not like these plans and decided to pick on the company by freezing its accounts and forcing it into bankruptcy. These are mere speculations and there is no reliable information to prove these claims.

Chronology – Despite the lack of a solution from any of the government agencies, Domodedovo Airlines resumed flights to the Far East on January 20, 2000, by lending fuel from other companies with their "word of honor" for future payment. On January 25, 2000, the airline administration started negotiations with the tax authorities but failed to find a mutual understanding.

The Ministry of Defense also owed Domodedovo Airlines 230 million rubles, but did not pay it back since it would set an unpleasant precedent for the federal government.

In fact, these were the only actions taken to resolve the crisis as of February 2000 (the time limitation designated for this study). One can only guess how the situation will develop. The airline will most likely be able to settle the dispute with the tax authorities by postponing the deadline for payment. Meanwhile, Domodedovo Airlines could at least try to get part of its money from the Ministry of Defense. The Director of the Federal Aviation Service was in favor of this option and promised to "analyze the problem of payment with the servicemen." The airline could possibly apply for bank credit in order to be able to pay its taxes and compensation to the affected passengers. Thus, its accounts would be reopened and the final resolution of the crisis could be postponed.

However, the crisis should have in fact been better managed since the airline is needed to service the more remote areas and to transport VIPs. If the company is not able to settle this problem with the tax authorities by itself, then the company must take this issue to court. This would mean introducing a new actor in the crisis management (i.e. the court). This could mean a long court ses-

sion and thus the company could be forced to suspend its activity for a longer period of time. That in turn would give Domodedovo Airlines' competitors a lead in the market and could eventually drive Domodedovo Airlines into bankruptcy.

According to the latest updates, the airline and the tax authorities have successfully met for negotiations. Domodedovo Airlines has been back to full service since early March 2000; however, the company still has to pay back 16 million rubles to all of its creditors.

Effectiveness of the crisis management – Once the tax authorities decide to reopen the airline's accounts, the crisis will be essentially over for those who use the company's services. Nevertheless, there could still be undesirable consequences for Domodedovo Airlines in the future.

6. CRISIS AT THE KACHKANAR MINING PLANT

Description of the crisis – This conflict-induced crisis (similar to the one in Vyborg) occurred at the Kachkanar mining plant, one of Russia's largest mining facilities. The plant provides high quality iron ores containing vanadium, titanium, platinum, gold and iron concentrates to the metallurgic smelting giants in the Urals and Siberia.

The General Director of the plant, Janol Khaidarov, organized it so that the three middleman dealers bought the plant's production for 218 rubles per ton. They then turned around and sold it to the metallurgical companies for 420–500 rubles per ton. The annual profit of this deal was estimated at US$ 48 million, a profit which the Kachkanar mining plant should have made from the very beginning. The plant workers and the miners were already furious upon hearing this because their wages had been reduced when Khaidarov became director.

The way the plant's top management carried out production and other activities violated the legal and social order at the plant and at the regional level. The low wages and poor standard of living for the miners meant that there was a high risk of a strike. If there was a strike, then the plant's production would be suspended and the entire town (which was completely dependent upon the plant in many ways) would simply be paralyzed. In turn this would affect the ore

supply to the metallurgic companies and would decrease the taxes paid into the local and regional budgets.

The Chairman of the plant's trade union claimed that the General Director refused to even discuss the problem with the workers. Unsurprisingly, the miners threatened to strike. The administration of the Sverdlovsk region was also discontent with the Director's behavior.

The General Director's policy affected the safety standards at the plant. Funds for buying new equipment had been reduced and the depreciation rate of the existing plant equipment was as high as 70% to 100%. Over the past few years, repair and maintenance received only 30% of the necessary funding which meant such tasks were behind schedule and this created conditions for an increased accident rate and a higher probability of a major accident.

On Tuesday night, November 2, 1999, the dam of the sludge storage facility broke and flooded the plant's premises. Economic damage to the plant alone was estimated at 207 million rubles. The economy and environment of Kachkanar as well as the Via River were badly affected. The measures taken by the plant administration to cope with the accident were insufficient. Industrial waste was washed out by the spring floods into the river and thus spread the sludge out into the region. The people in the neighboring towns of Nizhniaya, Tura and Lesnoi were also affected by the accident and this ecological disaster threatened the entire region of Sverdlovsk. Therefore, the situation at the Kachkanar mining plant can be perceived as a crisis.

Crisis actors – The top plant management should be considered the crisis source since it was the General Director's selfish policy that led to the shrinking of company funds for municipal social services and industrial safety, which increased the threat of a major environmental crisis in the Sverdlovsk region. His policy also increased the risk of a strike, which affected not only the plant but also the town of Kachkanar and the neighboring communities. The plant miners with their low wages and the residents affected by the sludge from the broken dam should be considered the crisis victims. The metallurgical plants had no other alternative than to buy the exceptionally high-priced ores from Kachkanar's middleman dealers.

Chronology – On December 31, 1999, the administration of the Sverdlovsk region declared a local state of emergency because of the dam accident at the mining plant. In conjunction with this, it was mentioned that the plant administration had overlooked plant safety. Furthermore, the General Director was specifically charged with personal negligence.

Given this, the Kachkanar local authorities supported the Sverdlovsk regional authorities' (who owned the bulk of the plant's shares) decision to replace the General Director (Khaidarov) and the Board Chairman (Gareev), and thus the plant's Board of Directors did this. The regional authorities' legitimate right to interfere in the plant's activities was authorized by the existing rules and regulations (mainly, the Federal Privatization Act). The Regional Governor's Decree (dated February 11, 1999) prohibits shareholders from dismissing the General Director of a state-controlled enterprise without the consent of the regional administration and the head of the municipal assembly. The Sverdklovsk regional administration then became the key shareholder of the plant and took over running the enterprise in every respect.

At 11:00 p.m. on January 29, 2000, Khaidarov and Gareev were dismissed, and the new General Director and Board Chairman were appointed. The new General Director assumed his duties immediately after his appointment. However, the members of the plant's administration, who had earlier supported Khaidarov, opposed all of these changes so fiercely that the new General Director had to have his office and the entire administration building guarded by the town police and security guards.

At 8:20 a.m. on January 30, 2000, the former plant administration and its supporters tried to attack the administration building. The attempt failed, but two security guards were injured. Less than three hours later, the assailants arranged a meeting near the Mayor's office. Most of these people were activists in the "May Movement" led by Alexander Bourkov who was the main opponent to the acting Governor of Sverdlovsk region (Eduard Rossel). The May Movement had long been known for making trouble. The assailants tried to seize the Mayor's office. The police fired a warning shot in the air and warned the assailants that they could use their weapons to defend the government building. The assailants retreated.

On January 31, 2000, the federal TV stations reported " the shooting of angry workers" and the workers' attempts to regain the "wicked redistribution of ownership" with footage of the attack on the Mayor's office by the May Movement activists. Likewise on February 2, 2000, the State Duma's Chairman, Gennady Seleznev, hastily accused the new plant's administration of having criminal links and urged the then Interior Minister, Vladimir Rushailo, to immediately interfere in the crisis at the Kachkanar mining plant.

In addition, Mr. Ashenbrenner from the German company (Davis International L.L.C.), which held almost twenty percent of the plant's shares, handed over a written protest to Governor Rossel for the "unacceptable violation of German investors' rights." The Metallurgy Minister, Molchanov, made reference to the replacement of the former General Director by saying that the former plant administration had failed to perform its duties and that the new director, Kozitsin, was a skillful professional and experienced leader.

The former General Director, Khaidarov, protested his dismissal in the Kachkanar town court, at the municipal and regional prosecutor's offices, and to the town and regional authorities. However, all of them confirmed the legitimacy of the new plant administration and dismissed his appeals.

The plant's trade union made a number of demands to the new General Director for higher wages and declared they would not interfere in the ongoing dispute. "Let the owners solve the problems themselves. We don't want to get involved. Our work and salaries come before everything else." In response, the new director (Kozitsin) ordered a stepwise 10% increase in monthly wages over a period of three months (i.e. a total of a thirty percent increase). In addition, the new plant management decided to terminate their business relations with the middleman dealers, and signed a direct contract with the customers.

Effectiveness of the crisis management – The analysis of the crisis management reveals three groups of crisis agents in this case: the active supporters of the regional administration, the opponents, and the observers. The plant's newly appointed General Director assumed his position but had to be protected by the local law enforcement agents when he was simply implementing the decision made by the Sverdlovsk regional administration. Some of the other actors (the administration, the court and the prosecutor's office) upheld

this decision and thus they validated the legitimacy of the plant changes.

The people who had been dismissed from the plant's administration and who made several attempts to reverse the decision were the main instigators of the crisis. In addition, the May Movement brought about mayhem at the plant and the Mayor's office when they tried to prevent the implementation of the changes. Among those opposing the decision were the German investors who felt that their interests were not being considered.

The crisis observers were the mass media, the State Duma represented by its Chairman, and the plant's trade union. The newspapers (analyzed in this study) did not mention any police activities in response to the State Duma's appeal to the Interior Minister's involvement. The newspapers did however mention that interfering in the affairs of a private enterprise violates the Russian Civil Code.

Worth special mentioning is the decision of the plant's trade union not to support any side in the conflict, but rather to simply make a list of demands to the new director. In fact, the union ended up being a crisis agent, since it initiated some measures which actually calmed down the crisis (namely, demands for a wage increase and a direct contract with the customers). These measures immediately had a positive and significant impact on resolving the crisis and were important in the long-term for preventing new crises. In addition to these measures, diverse strategies were used for coping with the crisis at the Kachkanar mining plant: negotiations, direct law enforcement, court appeals, and the exchange of official letters.

As a result of these efforts, the plant managed to solve some of its economic troubles. The new revenues obtained were put towards increased wages, tax revenues for the town and regional budgets, and modernization of the plant. The Kachkanar residents (including the miners and their families) noticed concrete improvements in their social living standards. Likewise, the work began on repairing the ruptured dam. Thus in terms of crisis resolution, one could admit that the strategies and measures taken by the key crisis managers delayed the crisis but eventually put an end to it.

7. THE CRISIS IN IVANOVO

Description of the crisis – The crisis developed in the city of Ivanovo, the former Soviet center of the textile and clothing industry. When the factories were first built there, there was a severe shortage of female workers so future weavers were encouraged to come to Ivanovo from all over the country. As a result, a mono-industrial city emerged with its economic and social life almost exclusively dependent upon the textile and clothing factories. For that reason Ivanovo was often called "the national textile capital" and "the city of brides." The quality of the Ivanovo textiles could not, however, compete with the foreign production and the local warehouses were soon overstocked.

After privatization occurred in Ivanovo, some of the new owners of the big enterprises began to sell the social infrastructure facilities (such as two recreation centers, two hostels and a summer camp for children). Even the weaver's looms were sold to Turkey and thousands of workers lost their jobs. However, the local authorities ignored the complaints and declared that the new owners were now responsible for making decisions regarding the production and sale of the textile facilities.

Enflamed by the local authorities' negligence, the Ivanovo residents organized a big meeting to discuss how to protect their interests. Picket lines, demonstrations and hunger strikes became everyday scenes in Ivanovo, and from time to time "women's riots" occurred. For example, when there was a delay in paying the workers' salaries at the Noviye Gorky textile factory, the desperate weavers took the Director hostage. Impoverishment and unemployment have flourished in the former "city of brides" since most of the textile and clothing factories have closed in recent years.

There is a severe lack of job opportunities outside the textile and clothing industry. As a result, thousands of weavers and their families have had to turn to retail trade (mostly at flea markets) bringing goods from Moscow or from abroad. Without salaries or a government child allowance, several women have been forced to leave the city or forced into prostitution. In addition to unemployment, other problems have mushroomed in Ivanovo. The construction and repair of buildings have stopped. Many day care centers and schools have closed and those that remain open are unable to feed the children. In winter, many buildings do not have proper heating so the

students do not take off their coats during class. Given the fact that the city budget is short of funds and is having a hard time paying for the city's electricity bills, the electric power stations have cut or completely terminated service to the industrial and transport enterprises. Consequently, the lights in residential buildings have to be switched off periodically a few hours at a time.

The morbidity rate (including that of serious illnesses) has increased in Ivanovo, and the occurrence of tuberculosis tripled between 1991 and 1999. The criminal rate is grim. Robbery, burglary, and murders increased dramatically in Ivanovo in the 1990s. All of these factors put together are more than sufficient for calling the situation in Ivanovo a crisis.

Crisis actors – The local and federal authorities and the new owners were the crisis sources. The federal authorities were responsible for turning Ivanovo into a mono-industrial city during the Soviet years and for neglecting the problems associated with privatization in the late 1980s and the 1990s; they simply passed on the problems to the new owners of the textile and clothing factories. The new owners are not concerned about re-establishing the Russian textile production and have given preference to other sources of fast income. The local authorities have failed to protect the social rights of the local residents and have been unable to help them cope with the crisis.

The main crisis victims were obviously the residents of Ivanovo, primarily the employees who lost their jobs. Everyone living in the troubled city, even those who were not working in the textile and clothing industry, has suffered economically and socially.

Chronology – None of the newspapers in our study provided concrete information on the crisis events or the decisions made during the crisis. They did however stress that the Ivanovo authorities ignored the existing crisis and failed to take any action to deal with it even after several demonstrations.

Moreover, some of the decisions made actually gave rise to the escalation of the crisis. For instance, the municipal Duma and the Mayor of Ivanovo (Valeriy Troeglazov) closed the biggest and best hotel in the city so the building could be used for the local police. As a result, some hundred employees lost their jobs. That only added to the severity of the crisis and just increased the number of crisis actors. Before the decision was made to close the hotel, the Ivanovo

Mayor was a crisis actor and only a minor source of the economic and social problems associated with the reduced production in the textile and clothing industry. However, he immediately turned into a major crisis source, who aggravated the existing unrest in the city.

Effectiveness of the crisis management – Opportunities for preventing this major crisis were lost because the federal authorities were not interested and did not want to get involved and the local authorities were passive. The development of the situation was crisis-prone and the crisis prevention policy was ineffective. In addition to that, the authorities, the former plant owners, and the new owners failed to cope with the acute phase of the crisis when it emerged and simply let it evolve into a much bigger problem. The measures for urgent response and primary recovery were basically nonexistent. Moreover, it would hardly be an exaggeration to say that the actual crisis management policy did not even exist at the local, regional and federal levels at the time of the socio-economic unrest in Ivanovo.

Industrial and Environmental Crises

8. POISONING CRISIS AT THE VERKHNIAYA SALDA SMELTER

Description of the crisis – On the night of December 12, 1999, an accident occurred at the Verkhniaya Salda smelter (one of the world's largest titanium producers). Dozens of workers were affected. Some were very seriously injured with respiratory burns as a result of the emission of nitric acid vapors. A special inter-organizational commission was organized to investigate the accident and issued a preliminary report. This preliminary report cited an electrical short circuit, which had in turn unplugged the plant's equipment, as the direct cause of the accident.

This was a crisis for a number of reasons. First, the event directly threatened human health and human life considering the fact that over 40 people were seriously injured and had to be hospitalized. The doctors have speculated that at least some of the injured (mainly those who had inhaled the nitric acid vapors) will eventually become paralyzed.

Secondly, the accident was also in part caused by obsolete technological equipment which was unable to adapt to an electricity failure. In turn, failure to replace the outdated equipment was a result of loopholes in safety management and the shortage of funds, and the responsibility of these failures rest on the plant and regional administrations. Even though it is hard to do anything when funds are short, the modest repairs and timely maintenance service would have dramatically decreased the risk of such an accident. These systematic errors in safety management and the risks to human health justify using the term crisis to describe this incident.

Crisis actors – The plant management and the Sverdlovsk regional administration can be considered the crisis sources. In spite of a number of warnings about continuous electricity failures, obsolete equipment, and previous accidents at the plant and in the region, the crisis actors did very little to prevent another accident. The other crisis actors (who were more crisis catalysts than crisis sources) were the plant security guards who delayed the crisis response by forcing the affected workers to submit time cards before allowing them to leave the plant premises instead of letting them go immediately to the hospital.

The crisis victims were the 109 people working at the plant when the accident occurred. Over 40 of them were seriously injured and had to be taken to the local hospital and the regional toxicological center. The worst injured were the women (most in their 50s) working near the hot bath with nitric acid. The main crisis agents were the doctors, who provided first aid and medical assistance to those affected at the local hospital and the toxicological center in Ekaterinburg, and the mass media (in particular, the newspaper "Kommersant"), which reported the accident.

Management of the crisis – One can identify two main types of crisis action for coping with this accident. The first involved the use of primary (urgent) response: evacuating the affected workers, providing medical aid to the injured, investigating the causes of the accident, and fixing the equipment. The other set of measures were more long-term in nature and focused on improving the safety management system (including preventive measures and an automatic warning system), replacing outdated equipment, etc.

The primary response measures were taken immediately after the electric transformer was cut (sometime around 5:00 a.m.). It

took the electricians about 45 minutes to find out the cause of the short circuit and then more than an hour (from 5:45 to 7:00) to check and activate the reserve transformer. By 7:00 a.m. the electricity supply to the plant had been restored and all units were back and running.

The evacuation of the workers who had been injured was not properly organized. The security guards delayed the response by requiring the workers to follow all of the bureaucratic procedures before leaving the plant, and a special safety team was not on the plant premises at the time of the accident. The good news was that everyone received adequate medical aid.

Effectiveness of the crisis management – The response measures implemented for coping with the accident were really helpful for getting the plant back into running order and for giving the necessary medical aid to those injured. However, this did not mean the end of the crisis for the victims; some will eventually become paralyzed. As for the long-term crisis actions, it is difficult to accurately assess their effectiveness and know whether they will ever be properly implemented.

This accident was in no way unique for the Sverdlovsk region considering the earlier environmental crisis at the Kachkanar mill and the accident at the Sredny Ural copper smelter. Unfortunately, these two previous crises did not serve as a timely warning for the regional administration or the management of the Verkhniaya Salda plant. Thus in general we can conclude that few lessons have been learned about preventative crisis management in Russia concerning crisis development and safety policies.

9. THE URANIUM CRISIS IN UZBEKISTAN

Description of the crisis – Devices containing cesium and uranium used to detect and measure radiation levels were shipped to the Navoi Electromechanical Plant in 1991. However for a number of reasons, this plant was never in service. The plant lacked proper security and safety measures, thus making it easily to smuggle the radioactive devices. A retired police officer, named Akhmedov, smuggled three of these containers (containing 55 kg of uranium).

Akhmedov hid these containers in his chicken coop until they could be picked up a seller who was going to pay as much as US$

1,500,000. Apparently Akhmedov was unaware of how dangerous the containers really were. Almost every member of his family was subjected to high levels of radiation.

Time passed. The chickens in the coop went blind, and Akhmedov's wife started complaining of various ailments. By chance the smugglers were caught when one of them tried to sell a container to an uncover policeman.

This situation should be considered as a crisis given the fact that the radioactive material was not properly stored and that it eventually came into contact with a large number of people who had absolutely no protective gear. Fortunately, the impact of the radiation was confined to one area and the radioactive devices had not been transported further. If playing children or some other unsuspecting person had accidentally opened the containers, radiation of 1,5 mR/h would have spread and would have killed everybody in the area. Likewise many other people could have been unknowingly exposed if Akhmedov had succeeded in selling the containers which most likely would have been transported to another area.

Crisis actors – The initial criminal act evolved into a crisis for those who came in direct contact with the radioactive material (i.e. the crisis victims), including the workers at the Navoi Electromechanical Plant since the plant never met the minimum safety standards. The administration of this facility, however, was a crisis source as well as a crisis agent.

Akhmedov, his accomplices and one of the plant managers (who had helped arranged the smuggling operation) should be regarded as the main crisis sources. The crisis was intensified when the radioactive containers were moved from the holding facilities to Akhmedov's private property. The crisis reached its peak when a potential customer of the containers turned out to be a policeman, and the smugglers were arrested.

The crisis victims included Akhmedov's family, who were exposed to large doses of radiation (especially his wife who took care of the hens), the neighbors and the Navoi plant workers who most likely carelessly handled the highly radioactive devices. The crisis actors were the potential customers who came to Akhmedov's house to bargain a deal for the containers, and the police officers investigating the case as well as the media reporters covering the case.

Management of the crisis – Given the fact that nobody paid attention to the missing containers at the plant, no measures were implemented to minimize the danger. It was not until a police officer had exposed the deal that the radioactive material was properly handled. The case was then turned over to the Antiterrorist and Corruption Control Department of the Ministry of Interior. This department was the major crisis agent providing management of the case later on as well as the prosecutor's office. The smugglers were caught red-handed, Akhmedov was arrested and an investigation began. Then the chicken coop was dismantled and the debris was buried in a special containment.

Effectiveness of crisis management – The specific measures taken to localize and alleviate the uranium crisis could be considered effective. However, the case should hardly be considered closed since the key culprits responsible for the smuggling of the radioactive materials still have not been prosecuted and sentenced.

Putting this crisis into a broader perspective, the uranium crisis could be considered as a part or stage of a larger creeping crisis. There was in general a lack of control over radioactive materials and harmful chemicals in the former Soviet republics (including Russia) throughout the 1990s. Many of the workers at the radioactive plants in these countries have smuggled and sold hazardous materials in order to make a living.

10. THE DISCHARGE OF CYANIDE INTO THE DANUBE RIVER

Description of the crisis – A break in the silt tanks at Aurul (a Romanian gold mining company) occurred in January 2000 and resulted in the discharge of some 100,000 m^3 of wastewater containing cyanide and heavy metals into the Danube River. Nearly eighty to ninety percent of the fauna and flora in the region was destroyed and the ecosystem was seriously disturbed. Heavy metals have settled at the bottom of the river and will therefore increase the risk of chronic intoxication for the local environment.

This environmental crisis had serious economic, social and political consequences for the countries along the Danube River. Some estimates predict that the magnitude of order for the economic damage in the affected regions amounts to percentages of their respec-

tive national GDP. The above consequences negatively impacted the internal politics in each of these countries and exposed the serious shortcomings of the regional (interstate) legislation.

The immediate cause of the accident was an obsolete silt tank, which had failed to be repaired. This happened despite the fact that Esmeralda Exploration Co. (an Australian firm owning fifty percent of the Aurul shares) agreed to do this when it purchased half of the Romanian company.

Crisis actors – The crisis involved many actors. The crisis source was the top management of Aurul Co., who had failed to take adequate safety measures in order to prevent or reduce the chances of an accident. Also the top management of Esmeralda Exploration Co. had disregarded the agreement they had made in the purchasing contract regarding the repairing and maintenance of the tanks. The Romanian government bears part of the responsibility for turning the accident into a crisis. The Romanian government actually tried to cover up the accident for more than a week and allowed the contaminated water to spill over the Romanian borders into the neighboring countries. This significantly increased the magnitude and the complexity of the crisis.

The crisis victims primarily were the communities along the Danube River in Romania and Hungary. The bulk of these communities' revenues came from fishing in the Danube but fishing in the Danube was immediately suspended after the accident. The river water is poisoned and will not be safe for many years to come. Even those who do not directly depend upon the river were also affected since the contaminated river water has infiltrated and polluted the ground water.

In addition, the farmers were affected, and in some regions farming has completely been terminated. For instance, this happened in the province of Vojvodina in northern Serbia which had been regarded as the breadbasket of former Yugoslavia. These people are still trying to recover from the recent war and this disaster just increased their suffering.

Local tourism (including the huge network of hotels, restaurants, shops, etc.) was hit hard by the accident so the local residents were certainly crisis victims. The beautiful landscape along the Tisa River and the Danube River in Hungary, which had been a popular

tourist site in the past and had generated a sizeable income for the local residents, was greatly damaged by the accident.

The Romanian government, earlier pinpointed as a crisis source, was at the same time a crisis victim. Negotiations on Romania's integration into the European Union began in Brussels on February 15, 2000. This environmental crisis substantially complicated these negotiations.

Numerous environmental organizations (several which have intensively studied the environmental consequences of the accident) and the mass media were among the crisis agents. In the first few days, some newspapers and TV stations exaggerated the severity of the crisis citing unverified data. This added to the fact that the crisis politically spilled over into the neighboring countries (for example Ukraine). Later these reporters had to admit that they had dramatized the crisis.

Last but not the least, the European Union should be also considered a crisis agent since it offered active assistance to Romania in handling the crisis. Yet the European Union had unwillingly and indirectly encouraged the Romanian government to cover up the accident since it had occurred shortly before the EU negotiations in Brussels were scheduled to begin.

Chronology – When Esmeralda Exploration Co. purchased 50% of the Romanian gold mining factory shares, it made a commitment to reconstruct the silt tanks at the wastewater treatment facilities. However, the greedy policy of quick profits outweighed the company's commitment and obligation to maintaining minimum safety standards. This to a great extent precipitated the crisis along with the poor supervision of the respective Romanian agencies and the national operator (the gold mining company).

On the night of January 30, 2000, toxic wastewater was discharged into the Danube River. For a few days, only the Romanian government and the culprits of the accident (Aurul Co. and Esmeralda Exploration Co.) knew what had happened and they tried to hide this from the public. Another discharge occurred on February 6, 2000. Three days later the Romanian government confessed to its neighbor, Hungary, about the first discharge. The other endangered countries were still unaware of the discharges. Later the Romanian government tried to justify this by saying that there had been a malfunction in the computerized communication system.

The toxic wastewater moved at a speed of 4 km/h and reached the Hungarian border on February 12, 2000. It was only then that the rest of the world learned about this tragic environmental crisis. However, the Hungarian government did not take any concrete measures to prevent the accident from escalating into a major environmental disaster. On February 13, 2000, the deputies of the Hungarian Parliament organized a symbolic funeral for the Tisa River and placed black flags and candles along the riverbank.

At the same time, two commissions were organized to evaluate the environmental damage and to find the culprits responsible for the accident so compensation could be issued to the affected communities. Both commissions only had Hungarian and Romanian representatives since none of the other countries were involved in the crisis at that time. For a few days, experts from Hungary and Romania discussed the matter among themselves without consulting any international law organizations.

The Romanian government tried to blame the Australian company. In turn the company sent a special team to the site to investigate the causes of the dam rupture and to find evidence to prove that Esmeralda Exploration's top management was innocent. The company lawyers tried to blame the accident on other factors, in particular the fast melting snow. The Romanian government stressed that since the Romanian gold mining company (Aurul) was a privately owned enterprise, its owners (Australians) should assume the damages. And with that said, the Romanian government refused to pay for any damages associated with the accident.

Since Romania refused to pay, the Hungarian government threatened to take Romania to the international court. Thus, the international court system was partially involved in the management of the crisis. In addition to compensation, Hungary also called for changes in international legislation. This involved the right to veto the construction of hazardous facilities in close proximity to international rivers, and amendments stipulating obligatory compensation for accidental damages to neighboring countries.

On February 14, 2000, the contaminated waters reached Vojvodina in Yugoslavia and spoiled the farmland thus throwing the country into a crisis. Yugoslavia immediately declared its intention to appeal to the international court. The crisis captured the attention of several other European countries. The Chairman of the Eu-

ropean Commission declared that the EU would consider the options for helping to alleviate the consequences of the accident.

By that time, other countries (Ukraine in particular) activated their crisis response units. The Emergency Ministry of Ukraine tested the water several times per day, special response teams were put on alert, potable water was stocked, and fishing and swimming was forbidden. Fortunately, the wastewater did not reach Ukraine since the hydroelectric power station dam "Iron Gate" stopped the toxic spill from spreading.

Effectiveness of the crisis management – The bulk of the crisis response activities were taken by the crisis agents. The newspapers did not assess the measures which were implemented. Yet, these sources clearly pointed out that the accident developed into a major environmental crisis which had many adverse political and economic ramifications for the affected countries.

Conclusion

Considering the multiple limitations of this study, it should be considered as merely an attempt to provide an overall view of the various types of crises and crisis management practices in Russia as reported and perceived by the Russian press. At the same time, this overview provides observations and conclusions we believe are of particular interest.

First, it supports *the concept of a crisis* according to most of the criteria used by the CRiSMART scholars as well as a few of the authors' own criteria. In particular it showed that the crisis events, examined in this study, threatened basic values and rights such as human life and health, national feelings (national self-consciousness, national pride), housing, employment, a clean environment, and self-realization. The crisis processes and/or their outcomes broke the social and organizational order in various ways (including failures in community services, civil disturbances, mass layoffs, unemployment, deterioration of the social infrastructure, environment degradation, etc.).

Secondly, the analysis revealed the remarkable *diversity of crises* existing in modern Russia. No less important are the many political, social, cultural, economic and ecological factors, which have provoked a number of transformations or mutations in the actual defi-

nition and perception of a crisis. Thus, these new crisis 'species' require new tools for managing them.

As for *crisis sources*, these involved terrorists, national movements, the military, new owners, company administrations, and various government authorities. The *crisis victims* included often town residents, employees, owners of various enterprises, and many others. *Crisis agents*, in particular those taking active part in conflict resolution, were represented by the President of Russia, EMERCOM, national security units, and the other federal and regional governmental bodies. Added to these should be the courts, the prosecutor's office, the plants and companies, local and regional administrations, the mass media, strikers' committees, and trade unions. Sometimes the world community was also involved.

There were often missed opportunities for taking control of the situation during *the management of these crises*. Good crisis management tools were lacking. Sometimes the tools existed, but failed to be used. The *crisis (re)solution*s were almost always achieved with negotiations, court trials or special aid programs for the victims.

Other possible ways to continue this research on the perception of crises and crisis management issues in the press would include expanding the sample and deepening the analysis. Primary information sources (from government agencies and departments) would further enrich any future research in this area. But this primary information needs to be made more accessible to the general public and definitely to academic researchers.

Nevertheless, despite such limitations, the findings and hypotheses in this study should be of interest to all (academics and practitioners alike) in the field of crisis research and crisis management. The Russian perspective of crisis management is scrutinized through the lens of the national press. This study may also serve as a basis for future crisis development in research programs focusing on comparative studies in this area.

References

Part I

Anatomiya Krizisov. (2000). (The Anatomy of Crises). Moskva: Nauka.

Antikrizisnoe Upravlenie: Materialy Mezhdunarodnoi Nauchno-Praktich-eskoi Konferentsii. (1998). (Anticrisis Control: Proceedings of International Scientific-Practical Conference). Saransk: Saratovskii Gosudarstvennii Universitet.

Chesnokov, N. (1991). Sovremennyi Sotsialnii Krizis i Puti Vykhoda iz Nego. (The Contemporary Social Crisis and Ways of Recovery). Mogilev.

Giddens, A. (1993). Sociology. (Trans. to Russian from 1989 English edition. London: Polity Press).

Katastrofi i obshchestvo. (2000). (Catastrophes and Society). Moskva: Kontakt-Kultura.

Rossiya u Kriticheskoi Cherty: Vozrozhdenie ili Katastrofa. (1997). (Russia at the Critical Threshold: Rebirth or Catastrophe). Moskva: Respublika.

Shrivastava, P. (1993). The Evolution of Research in the U.S. on Technological Crisis. In: Quarantelli, E. L. (Ed). Proceedings of the United States – Former Soviet Union Seminar on Social Science Research on Migration for and Recovery from Disasters and Large-Scale Hazards. Newark: Disaster Research Center of Delaware University.

Spravochnoe Posobie po Istorii Nemarksistskoi Zapadnoi Sotsiologii. (1986). The Reference Book on the History of Non-Marxist Sociology of the West. Moskva: Institut Sotsiologii RAN.

Stern, E. K. (1999). Crisis Decision Making: A Cognitive Institutional Approach, University of Stockholm.

Svedin, L. (2001). Crisis Migration and Community Resilience: the Red River Flood of 1997. Stockholm: CRiSMART Publication Series, Vol. 17.

Tsennosti Sotsialnykh Groupp i Krizis Obshchestva. (1991). (Social Group Values and Social Crisis). Moskva: Nauka.

Zondov, K. (1999). Stanovleniye Teorii Transformatsionnogo Krizisa Ekonomiki Rossii. (Development of the Theory of the Transformation Crisis of the Russian Economy). Moskva: Nauka.

Part 2

CASE 1

"Moskovskiy Komsomolets"

September 11, 1999

Egorova, E. V Moskve Voina – psykhologicheskaia (Psychological Warfare in Moscow)

Skoblo, S. and Samoilov, S. Rabotaly professionali (The Work of Professionals)

September 14, 1999
A. Morozov. Vkus voiny (The Taste of War)
September 16, 1999
Bayun, N. Otdaite terroristov (Give the Terrorists Back)
Moskvina, N. Moskovskikh okon negasimiy svet (The Glomming Lights in Moscow's Windows)
September 23, 1999
Pichugina, E. Vzryv, pokrytiy mrakom (Explosion Covered with Gloom)
October 27, 1999
Pichugina, E. Vot vzryvy otgremely i a-ha? (Thundering Explosions...What's Next?)
January 19, 2000
Pichugina, E. Razorvannye serdtza (Torn Hearts)

"Argumenti i Facti" (Newsletter)
September 1999
Proshak, L. Teper nas uzhe ne pugayut, a prosto ubivayut (They Are No Longer Just Fighting Us... Now They Are Killing Us), p. 2.
Kibalnik, E. and Kolchik, S. Lyudi na fone tragedii (People Faced with a Tragedy), p. 2.
Bouldakov, V. and Barmina, I. Moskva: traurniy feierverk (Moscow Mourning Firework), p. 3.
September 1999, No 38
Kibalnik, E. Kak pomoch postradavshim? (How to Help the Victims?), p. 1.
Kibalnik, E. Perezhit noch (To Survive the Night), p. 2.
Bouldakov, V. and Barmina, I. Poka vzryv ne grianet (Until the Explosion Blasts), p. 3.
Bouldakov, V. Smert iz podpolia (Death from the Underground), p. 3.
December 1999, No 50.
Barmina, I. Vzryv snios kryshu navsegda? (The Explosion Blew the Roof Off Forever?!), p. 2.

"Kommersant"
September 11, 1999
Dyupin, S. Tak rabotayut professionaly (That's How the Professionals Work).
Tak vzryvaiutsia doma (That's How the Houses Exploded-Statistics on the Explosions)
Gridneva, N. and Kashin, S. Tolko Prezident Rossii imeyet pravo na traur (Only the President of Russia Has the Right to Mourn)
September 14, 1999
Topol, S. Ponedelnick, 13 (Monday, 13)
Topol, S. Boynia N 3 (Slaughter No 3)

Escho 38 meshkov vzryvchatky (Thirty Eight More Bags of Explosives: Department of Crime)

September 18, 1999

Escho 7 domov (Seven More Houses. Department of Crime)

"Segodnya"

September 11, 1999

Dibsky, K. Osobennosti natsyonalnoiy traura (The Peculiarities of National Mourning)

Skakunov, I. Versiya zamedlennogo deistviya (Ways of Restraining Action).p.7.

September 14, 1999

Dvinsky, I. Dalshe tolko panika (Next – Only Panic)

Koritsky, A. Terakty v stolitze oplacheny (Terrorist Attacks in the Capital Were Ordered)

September 16, 1999

Skakunov, I. Terroristy nakhodily pomochnikov po obiyavleniyu (Terrorists Found Assistants in a Notice)

Skakunov, I. Moskovskiye doma vzryvali diyavolskoiy smesiu (Moscow Houses Were Exploded by a Devilish Mix)

September 18, 1999

Skakunov, I. Ruki v gexogene (Hands in Hexogen)

September 21, 1999

Ukolov, R. Glavniy spasatel Rossii stal eio Geroyem (The Main Rescue Operation in Russia Was Heroic)

October 4, 1999

Domin, S. My predstavlyaem zhilploschad v sootvetstvii s zakonom (We Build Houses in Accordance to the Building Codes)

"Pravda"

September 14–15, 1999

Eratova, M. Den traura pod grokhot vzryva (Day of Mourning Accompanied by a Thunder of Explosion)

"Zavtra"

September, 15

Brezhnev, A. Pogrebenie (Burial)

CASE 2

"Kommersant"

September 4,1999

Barakhova, A. Glavu Karachaevo-Cherkessii ne priznaiot chast naseleniia (Some of the Local Residents of Karachai-Circassia Do Not Acknowledge the Head of the Republic)

September 7, 1999

Barakhova, A. Semenov gotov obsuzhdat Cherkesskuyu nezavisimost (Semenov Is Ready to Discuss Circassian Independence)

September 16, 1999

Barakhova, A. V Karachaievo-Cherkessii nachalas voina (War Begins in Karachaevo-Circussia)

September 23, 1999

Barakhova, A. B. Lyauf. Na Volcodava rasschityvat ne prikhoditsia (Volkodav Is Not the Man to Rely Upon)

September 28, 1999

Barakhova, A. Dvoevlastie zakonchilos (The End of Two Powers)

"Segodnya"

September 9, 1999

Koretsky, A. Sobytiya v Cherkesske (Events in Circassk)

September 11, 1999

Koretsky, A. Karachaevo-Cherkessiya: chto budet zavtra? (Karachai-Circassia: What Will Happen Tomorrow?)

September 16, 1999

Koretsky, A. V Cherkesske liotsa krov (Circassk Is Bleeding)

September 18, 1999

Koretsky, A. General Semenov prosit poschi u Volkodava (General Semenov Asks Volkodav for Help)

September 28, 1999

Koretsky, A. General Semenov popytalsia ostanovit "schiotchik Putina" (General Semenov Tries to Stop "Putin's Opponent")

October 20, 1999

Koretsky, A. Rossiiskaia konstitutsiya otmenena (Russian Constitution Is Cancelled)

October 25, 1999

Ofitova, S. Vladimiru Semenovu dali god (They Gave Vladimir Semenov One Year)

"Trud"

September 2, 1999

Janchenkov, V. Vzryvoopasnoie sostoianie (Highly Explosive Position)

September 7, 1999
Smirnov, V. Stenka na stenku (Dead End)
September 11, 1999
Smirnov, V. My za edinuiu i ne delimuiu (We Stand United and Undivided)
October 13, 1999
Dorofeev, N. Pazvod po zakonu ili po-kavkazski (Divorce by Law or by Caucasis Tradition)

"Rossiiskaya gazeta"
September 4, 1999
ITAR-TASS. Karachaevo-Cherkessia khochet natsionalnoy avtonomii (Karachai-Circassia Wants National Autonomy)
September 18, 1999
Beldugina, L. Obschego yazyka ne nashli (Failure to Find a Common Language)
"Pravda"
September 10–13, 1999
ITAR-TASS. Gremiat vzryvy: v Moskve, v Cherkesske (Explosions Thunder in Moscow and in Circassk)
September 24–27, 1999
ITAR-TASS. Karachaevo-Cherkessia (Karachai-Circassia)
October 1–4, 1999
ITAR-TASS. Karachaevo-Cherkessia (Karachai-Circassia)
October 12–13, 1999
ITAR-TASS. Karachaevo-Cherkessia (Karachai-Circassia)

CASE 3

"Novaya gazeta"(weekly)
December 2–5, 1999, No 45
Politkovskaya, A. Milosti prosim v ad. (Welcome to Hell), pp. 1–2
Milashina, E. Terror nasiliem my razrushim. Do osnovaniya (Terror Raised by Violence. On the Ground), p. 2
December 16–19, 1999, No 47
Politkovskaya, A. Svyaschennaia voina i pozorniy mir (Sacred War and Shameful Peace), pp. 1–2
December 20–26, 1999, No 48
Prokhaskova, P. V Groznom idut tiazholye boi (Tough Fighting in Grozny), p. 12.

"Argumenti i facti"
December, 1999, No 50.
Chto budet s Chechnioy? (What Will Happen to Chechnya?), p. 2.

"Trud"

December 8, 1999

Yanchenkov, V. Zhivoi schit (A Living Shield)

"Rossiiskaya gazeta"

December 12, 1999

ITAR-TASS. Uslovie odno – clozhit oruzhie (The Unique Phrase – To Lay Down Arms)

"Kommersant"

December 8, 1999

Syrtsov, I. Milosti prosim, canktsii protiv Rossii uzhe nachalis (Welcome, There Are Already Sanctions Against Russia)

Stepenin, M. Chechentsy prosiat prodlit srok ultimatuma (Chechens Call for an Extension of the Ultimatum)

"Segodnya"

December 1.1999, No 272.

Viktorov, A. Sovet Muftiev prizyvaet k mirnomu resheniiu Chechenskoi problemy (The Council of Mufti Calls for Peaceful Decisions on the Chechen Issue)

December 8.1999, No 278.

Skakunov, I. Vy bombite, my vas podozhdiom (Do Your Bombing, We'll Wait for You)

"Pravda"

November 4, 1999

Lorsanukaev, S. V poskakh vykhoda iz Chechenskogo tupika (In Search of a Resolution to the Chechen Crisis)

November 25, 1999

Kozhanov, N. Chechnia: kogda zamkniotsia koltso (Chechnya: When Will the Ring Close)

February 8–9, 2000, No 14.

Kozhanov, N. Grozniy osvobozhdion (Grozny Is Free)

CASE 4

"Rossiiskaya gazeta"

November 13, 1999

Nevinnaya, I. Variant ministra Kalashnikova (Minister Kalashnikov's Option)

"Trud"

October 15, 1999

Bezrukova, L. Zakhvat (Seizure)

November 16, 1999

Velednitsky, A. Daiosh natsionalizatsiiu (Let Nationalization Go)

Velednitsky, A. Bulyzhnik proletariata (Paved by Proletariats)

"Argumenti i Facti"

December, 1999, No 49.

Kurganova, V. Posledniy boi. Bessmyslenniy i besposchadniy (The Last Battle: Senseless and Merciless), p. 10

December, 1999, No 50

Mikhailova, T. Zavody snova rvut na chasti (The Plants Are Again Torn into Parts), p. 8

"Segodnya"

October 15, 1999

Gavrilina, S and Gosteva, E. Vooruzhen i ochen zakonoposlushen (Armed and Compliant to the Law)

October 20, 1999

Gavrilina, S., Gosteva, E. and Osetinskaya, L. Vyborgskiy CBK mogut peredat narodu (Vyborg PPM Can Be Returned to the People)

November 20, 1999

Boreiko, A. and Nesvizhsky, V. Vodochno-neftenoy kombinat (A Vodka and oil Integrated Plant)

November 27, 1999

Boreiko, A. Vyborg Rossii (Vyborg of Russia)

"Kommersant"

October 15, 1999

Tsiganov, A. and Smirnov, A. Profsoiuz pobedil spetsnazevtsev (Trade Union Won over the Special Troops)

November 18, 1999

Arseniev, A. Net smysla vkladyvat dengi v takuiu stranu (No Sense in Investing Money in Such a Country)

January 2, 2000

Klepikov, A. and Smirnov, A. Vyborgskiy stsenariy na LFZ (The Vyborg Scenario at Lomonosov Porcelain Plant)

"Pravda"

October 15–18, 1999

ITAR-TASS. I snova Vyborg (And Again Vyborg)

October 19–20, 1999
Volinsky, N. Zhandarmy napadaiut po nocham (Gendarmes Attack at Night)
November 16–17, 1999
Levchenko, M. Rossiai, uslysh Vyborg (Russia, Listen to Vyborg)
December 1, 1999
Volinsky, N. Vyborgskiy CBK v blokade (Vyborg PPM Is in a Blockade)
January 18–19, 2000
ITAR-TASS. Vyborg.
February 1–2, 2000
Vladimirov, I. Vyborgskiy CBK. Borba ne okonchena (Vyborg PPM: The Fight Isn't Over)

"Zavtra"
November, 1999, No 44.
Lyskov, A. Vyborgskiy boevik (Western Vyborg), p. 7

CASE 5

"Kommersant"
January 21, 2000
Zavarsky L. Gumanitarnaia katastrofa v Domodedovo (Humanitarian Catastrophe in Domodedovo)
January, 26
Zavarsky L. "Domodedovskie avialinii" letaiut na chestnom slove (Domodedovo Airlines Fly with Word of Honor)
February, 4
Zavarsky L. Reys na privatizatsiyu (Flight to Privatization)

CASE 6

"Segodnya"
February 1, 2000
Davydova, V. Obogatitelnaya rokirovochka. (Enrichment Castling).

"Rossiskaya gazeta"
February 8, 2000
Demidov, P. Bitva za vanady. (Struggle for Vanady).

"Sovershenno Sekretno"
February, 2000, No 2
Latynina, J. Trety peredel. (The Third Redistribution), pp. 5–7

"Trud"

February 8, 2000

Djapakov, A. Cherny peredel. (Black Redistribution)

February 10, 2000

Zayavlenie profkoma GOK. (Statement from the Plant's Trade Union)

February 15, 2000

Lopatin, V. Pust tochku postavit zakon. (Let the Law Decide)

February 22, 2000

Kovalenko, V. "Vooruzhennye molodchiki" okazalis... molodkami. ("Armed Guys" Turned to Be...Young Girls).

CASE 7

"Trud"

January 19, 2000

Knyazev, V. Gorod golodnykh nevest (The City of Hungry Brides)

CASE 8

"Kommersant"

December 15, 1999

Smirnov, V. Rabochie otravilis azotnoi kislotoi. Opasnaia avariia na Verkhnesaldinskom metallurgicheskom obiedinenii. (Workers Are Poisoned by Nitric Acid: The Verhknya Salda Smelter Disaster)

CASE 9

"Trud"

September 14, 1999

Biriukov, V. and Fuzailov, A. Kury klevali uran. (Hens Were Pecking at Uranium).

CASE 10

"Segodnya"

February 15, 2000

Gamova, S. and Skakunov, I. Chiornye flagi nad Tisoi. (Black Flags over Tisa)

February 17, 2000
Gamova, S. Miortviy sezon na Dunae. (Season of Death on the Danube)
February 29, 2000
Gamova S. Zhizn na Tise ne obnaruzhena (No Life Was Found in Tisa)

"Rossiyskaya gazeta"
February 15, 2000
Lukianov, F. "Neytronnaia bomba" na Dunae. ("Neutron Bomb" in the Danube)

"Kommersant"
February 15, 2000
Miklashevskaya, A. Redkaia ryba doplyviot do serediny Dunaia (A Rare Fish Made Its Way to the Middle of the Danube)

"Trud"
February 15, 2000
Chigrin, I. Chornye flagi nad Tisoi. (Black Flags over Tisa)
February 17, 2000
Chigrin, I. Rumynia ne khochet platit za otravlenie rek. (Romania Doesn't Want to Pay for Poisoning the Rivers)
February 19, 2000
Otravlennaia voda idiot v Ukrainu. (Poisoned Water Flows to Ukraine)

"Argumenti i Facti"
January, No 8
Proshak, L. and Shkarovskaia, V. Cianistiy Dunai (Cyanided Danube), p. 21.

Part II
Crisis Development and Response: Four Case Studies

Chapter 4
Managing the Alleviation of the 1995 Neftegorsk Earthquake

Boris Porfiriev

Case Overview

In 1995, two major earthquakes occurred simultaneously in the Kobe prefecture in Japan and in Sakhalin in Russia (See Appendix 6.1 for specific details). While the Great Hanshin-Awaji earthquake in Kobe turned out to be the one of the world's most costly disasters with damages estimating about US$ 100 billion (Sasayama, 1996), the Neftegorsk earthquake in Sakhalin can be considered one of the most fatal in world history.

The Neftegorsk earthquake killed immediately 1,995 people, injured some 400 others and over 400 people were reported missing. The total number of people directly affected by the earthquake in Sakhalin (ca. 2,500) was in absolute terms much less than the total in Kobe (ca. 6,000). Devastating earthquakes hit China in 1976, the Turkmen Republic in 1948, and Tokyo in 1923 (each killing more than 100,000 people). More recently over 12,000 people were killed in Gujarat, India in 2001 and some 50,000 people in Turkey in 1999. However in relative terms, the town of Neftegorsk lost almost 72% of its population.

In relative terms, a similar disaster occurred when a major tidal wave hit the Far East in 1952. Circa 80% of the Severo-Kurilsk residents were killed. Earthquakes and other natural disasters are commonplace in world history. Ancient Pompeii in Italy was virtually decimated by the Vezuvius volcano in 79 A.D. Each of these earthquakes has also had tremendous economic consequences. More importantly, many people have become seriously handicapped or homeless, and the victims and their families have suffered enormous psychological stress. In fact in Neftegorsk, several families were completely wiped out by the earthquake. Damages were estimated at about 100 million US dollars; quite a substantial amount for a

town of just 3,500 residents (see Kallioma, 2000; Vikulin, 1996; Appendix 1 of this chapter).

The earthquake in Neftegorsk was a real tragedy. The entire community was completely devastated; those who survived the disaster abandoned the town and the town simply disappeared from the map. The memorial built soon after the tragedy serves as the only reminder that there was once a lively town here. Since May 28,1995, a memorial service has been held annually in Sakhalin and is a day of grieving (Shlikova, 2000).

This paper discusses the earthquake disaster and its subsequent management with particular focus on the affected communities' vulnerability, the decision-making occasions and the various measures implemented by the crisis management actors (institutions, functions and social groups). All of the basic policy levels (including the local, regional and federal authorities) are considered and a few international aid organizations are also mentioned. Such an approach provides a comprehensive analysis of some of the causes behind the Neftegorsk crisis (i.e. the loopholes in emergency planning and disaster preparedness).

In turn, this case study could be of particular interest for disaster and crisis theorists in terms of comparing the organizational and policy model used in Russia, a country in transition. Similar models still exist in the Baltic countries as a result of the Soviet legacy. In addition, this case study can help crisis management practitioners learn more about vulnerable crisis management in order to help prevent future disasters (see Kouzmin and Korac-Kakabadze, 1999).

Defining a Crisis and a Disaster

Social science scholars and practical managers use a number of concepts to define a major unexpected event which involves a threat or some sort of undesirable impact on a community and which breaks the social norms. When such events and processes (i.e. social conflicts, technological accidents, natural disasters and compound hazards) occur within the social and ecological systems, often debilitating and/or deteriorating consequences are produced that provoke uncertainty, incur economic damage and increase social, psychological and political tensions.

Such situations demand a special management policy with measures and mechanisms different from those used for everyday routines and often require an immediate, decisive and comprehensive response. In the West practical notions and research about crises, emergencies and disasters are more extensively used. It is important that these terms are considered in terms of methodology (which predetermines a conceptual structure) and the practical perspective (which provides a description of the subject area and the mission of the management process). The problems of crisis, emergency and disaster management in uncertain and dangerous conditions have been studied for more than half a century and research in this area has evolved substantially over time.

The more traditional concept of a crisis emphasizes time pressure, the element of surprise and a threat to core values – often in the form of military action by some adversary. Dutch and Swedish scholars have contributed to a more balanced interpretation which stresses uncertainty rather than the element of surprise and considers a wide gamut of values – not just those restricted to national security. In their definition of a crisis, central decision-makers perceive: there is a threat to core values, societal norms and/or the basic infrastructure of the social system; time is limited; and a high degree of uncertainty is present (Rosenthal, 1986; Rosenthal, Hart and Charles, 1989: 10; Shrivastava, 1992: 5; Svedin, 1999; Sundelius, Stern and Bynander, 1997: 13).

In my opinion, the notion of a crisis is also applicable for describing situations which disturb communities and the local environment. However, the direct threat to human health and life as a core value is not necessarily a compulsory aspect of this notion. The impact of a crisis upon a community and/or the local environment can vary in severity.

When looking at an extensive and ongoing crisis, social science scholars (especially those in the US) most widely use the concept of a disaster. My analysis reveals that in Russia practitioners (administrators, managers, police, fire fighter, etc.) and researchers still prefer the terms "emergency" and "accident" (see Britton, 1987; Porfiriev, 1998: 35). In my opinion these terms are more suitable for acute crisis occasions which disturb or have a debilitating impact on the communities and the environment.

Crises involving many casualties, huge economic losses and irreversible environmental deterioration (like the one in Sakhalin in 1995) should be regarded as catastrophic disasters or catastrophes (see Appendix 2 of this chapter). Various approaches and the systematic analysis of similar crises are presented in order to provide a more comprehensive understanding of the concept.

Method

An institutional and functional analysis and a historical and comparative approach are the primary research methods used in this case study. These are employed in order to explore and to analyze the management decisions made and the coping measures implemented during the Neftegorsk crisis within a broader framework.

The Neftegorsk disaster is placed within the context of other major earthquakes in the world, especially those which occurred shortly before or after the one in Sakhalin (i.e. in Northridge, USA in 1994 and in Kobe, Japan in January 1995). The decision-making occasions and the measures implemented by certain organizations in response to the Neftegorsk disaster are analyzed and compared to previous major crises.

This case study considers the model introduced and developed by Dynes and Quarantelli, but it is not presented in whole here since it has been extensively discussed elsewhere in disaster literature (see original sources – Dynes, 1974/1998; Dynes and Quarantelli, 1968; Quarantelli, 1966/1970; Quarantelli and Dynes, 1977). The characteristics of the key actors involved and the decisions they made and implemented during the crisis can be categorized using Dynes and Quarantelli's model. To a certain extent, this serves to support the model, which has been around for three decades without any serious challenges (Scanlon, 1999).

Sources and Limitations

The foundation of this study is comprised of a variety of secondary sources and to a lesser extent data derived from primary sources. The latter includes informal interviews conducted by the author with a few of the rescue workers, fire fighters and police officers involved in the response operations in Sakhalin in 1995. Their com-

ments provided valuable insight for understanding the behavioral aspects of crisis management at various phases. Furthermore, some of these officers videotaped the disaster while in the field. Likewise information and video footage was obtained from the local and regional TV stations. Both the amateur and professional videos were quite useful and informative. News reports on federal TV also served as an important secondary data source. In addition, the author collected a dossier with various regional and federal newspaper clippings. Some factual information about the earthquake was collected from geological surveys. If not explicitly cited, the data used in this case study was obtained from the video footage.

Two factors largely limited the amount and type of data collected. First of all, there was the problem of collecting primary data given the shortage of funding and the remoteness of the disaster area in question (which was eight time zones from Moscow). Secondly the study focused primarily on tactical decision-making and the measures implemented by the regional and federal response units, not the local involvement in the rescue operations.

Crisis management is perceived as a cyclic process and thus this case study has been dissected into functional and institutional elements rather than by its cognitive institutional elements (see Stern, 1999). The former provides a better understanding and means for assessing the operational mode and the effectiveness of specific decisions in comparison to the existing mandates and stipulated functions with consideration given to the changes influenced by specific contingencies. Meanwhile, a functional and institutional analysis (see Kouzmin and Korac-Kakabadze, 1999) does not provide an adequate explanation or description of the actual process of decision making (i.e. why certain decisions are made and others not, the interests and conflicts steering decision-making processes, etc.). On the contrary, a cognitive institutional approach reveals the nature and logic of the decision-making process, the actors' roles and conflicting interests, and the implications of each decision.

This case study is restricted to the time frame from mid May to mid June 1995 when the response operations were terminated. However, some reference is made to the immediate recovery stage two months later and provides some insight on the disaster aftermath, including a few lessons learned.

The last but perhaps the most important delimitation was the incompleteness of the secondary sources which made up the bulk of the empirical information used for this study. The secondary sources (available to the author) did not provide systematic hourly updates about the disaster. This explains the gaps in the documentation (mainly, the facts and figures) cited in the case overview and management sections (Porfiriev, 1998). The lack of data hindered the attempts to construct a chronology of the crisis events and the specific activities of certain actors. Thus only general characteristics of the most important crisis events, key decision-making occasions and implemented measures were derived from the existing fragmented data. Moreover, substantial changes were made in the crisis account, with reference to the specific decision-making occasions, a year after the disaster (see Porfiriev, 1996). Nevertheless, the reconstruction and the analysis of the Neftegorsk disaster provide valuable insight and opportunities for learning.

Disaster and Disaster Management

The strategic management regarding the political and institutional context of the Neftegorsk earthquake is discussed in Chapter 2 of this volume (see Faleev, Akimov and Porfiriev) summarizing the EMERCOM framework. Therefore, the analysis of this case will begin directly with the disaster's tactical management.

TACTICAL MANAGEMENT: LOCAL AND REGIONAL VULNERABILITY

The earthquake in Neftegorsk was quickly perceived as a national disaster and thus the regional and federal urgent response units were quickly activated. However a number of specific features (both of geographical and social nature) quickly escalated the event into a catastrophic disaster.

The earthquake struck the northern part of Sakhalin which is an island located in the Far East in Russia between the Sea of Okhotsk and the Sea of Japan The island's climate is harsh. In January the average temperature is between minus 20–25°C and in July varies from + 5°C to 10°C. Annual precipitation is low (an average of 250–500 mm per year) and the island is often hit by strong winds.

The infamous Russian novelist Anton Chekhov worked a few months in Sakhalin as a medical doctor and wrote the book "The Island of Sakhalin." Chekhov described in great detail the harsh climate and the tough living conditions there.

The island as a whole and the affected area (an area of about 15,000 km^2) in particular are famous for its rich oil and gas fields which are owned by the federal corporation *Sakhalinmorneftegaz*. This company drills oil and gas from the Okha *rayon* (a regional district) and pumps it through undersea pipelines to the mainland. This district has several towns and settlements including Okha (the district center), Neftegorsk, Sabo and a few others which are primarily inhabited by oil and gas miners and their families. The total population of northern Sakhalin is almost 60,000 with a low population density of some 4–5 people/km^2.

Both in terms of physical and economic geography the island is especially vulnerable to a disaster in at least three significant ways. Firstly, the climatic conditions are harsh, particularly in spring (in late April/early May) when the temperature fluctuates between +2°C and –2°C. This means that shelter and warmth are necessary. This was an issue after the earthquake hit since people were trapped under rubble and ran the risk of freezing to death. This risk was considerably higher for small children since their bodies can not withstand the cold as well as adults.

Secondly, Sakhalin is one of the most remote areas in the country; it takes no less than 10 hours to reach the regional center of Yuzhno-Sakhalinsk by plane from the European part of Russia, where the bulk of the rescue and relief forces are located. This means that rescue and medical care teams require a great deal of time and planning if they are to assist the island of Sakhalin. Also one should consider the time required to process warning and notification signals, to verify the data, and to mobilize the necessary forces on the island itself. It takes quite a bit of time to get from Yuzhno-Sakhalinsk, which is in the south, to Okha in the north. This further increases the amount of time needed to allocate and distribute resources. However, the low population density in the area means that a relatively small number of people are affected by such crises in comparison to those living in larger cities like Kobe in Japan or San Francisco in the USA.

Thirdly, the dense network of oil and gas mining facilities and pipelines constructing the industrial landscape in northern Sakhalin puts the local residents at high risk. World experience shows, and this study confirms the fact, that numerous pipelines and infrastructural facilities (electric grids, roads and so on) are susceptible to natural disasters, which often result in substantial economic losses. In addition to economic losses, damaged pipelines and ruptures can lead to oil spills and gas leaks, and thus can cause a serious environmental crisis.

Such risks are substantially increased in the event of a severe earthquake (like the one that hit in 1995). Moreover, many seismologists believe that the exploitation of oil and gas deposits contributes to the initiation of an earthquake. The world known seismologist A. Nikolayev has asserted:

> "Obviously, according to all criteria enumerated earlier the Sakhalin earthquake conforms the hypothesis regarding the potential impact of oil extraction upon earthquake conditions. Essentially, there is not doubt that the development of oil fields has affected both the process of creating an earthquake's center and its outbreak" (Nikolayev, 1995).

These geographic conditions apparently contributed to the communities' vulnerability to an earthquake. No matter how substantial the physical impact is, the core of the devastation is usually primarily rooted in the social domain of the community hit by the disaster.

The key features of this social domain (which in a broad sense includes the historical, cultural, political and socio-economic conditions of Russia as a whole and of northern Sakhalin in particular) negatively influenced the local and regional communities' resilience to the 1995 earthquake. From this perspective, one should emphasize the erroneous economic policy of the former Soviet Union, which adversely tampered with the remote regions of the country including the Far East. Excessive military funding and the centralization of the Soviet economy deterred resources from developing civilian industries. In particular, this involved cost-saving measures for the construction of civilian installations including residential buildings. Cheap municipal apartments and temporary infrastructural units mushroomed at the expense of safety and comfort so that resources could be pumped into developing gigantic military

and industrial facilities. The deep economic crisis that escorted the dissolution of the Soviet Union and the chaotic economic reforms of the early 1990s made the situation even worse. In addition, financial and material resources, which had previously been allocated for mitigation and preparedness programs (including those for earthquake prone areas), were significantly reduced after the dissolution of the Soviet Union.

Consequently, all of this has had adverse implications for the northern Sakhalin communities, namely its resilience and preparedness for crises. One major concern is the quality of building construction in Sakhalin. Such issues were also raised after the Spitak earthquake in Armenia in 1988 (see Wyllie and Filson, 1989; Porfiriev, 1993). Cheap construction materials and poor technology were widely used in Sakhalin in 1969–1970 for building panel houses and the social infrastructure. These building projects were often in accordance to the existing building codes, but these building codes greatly underestimated the seismological activity in the area.

In addition to the poor building materials, the buildings were actually poorly constructed for a number of reasons (low expectations, low working morale and a lack of supervision). As a result, this considerably increased the risk for accidents. In developing countries the quality of buildings is generally poor because people simply can not afford to comply with all of the building codes and standards, yet this is not the only reason for poorly constructed buildings in Russia. Nevertheless, the consequences are the same and this means increased vulnerability for certain communities.

Another significant factor for poor crisis management in Russia is the low level of preparedness (i.e. crisis forecasting and warning), which to a considerable extent influences the success or failure of response operations. Of the 22 seismological stations located in the Far East as late as 1994 (including the one in Okha close to Neftegorsk), 19 or 86% are inoperative because of a lack of funding. Likewise, the only fire station in Neftegorsk was closed just three months before the Neftegorsk earthquake hit (Riabchikov, 1995; Tsarev and Zolotov, 1995a).

In addition, there were institutional loopholes in the seismological zoning system in the former Soviet Union. Seismological mapping was conducted in the late 1960s and served as a basis for the building codes which existed when the bulk of the 17 five-story resi-

dential buildings were constructed in Neftegorsk (Ulomov, 1995). The risk assessments and building standards at that time substantially underestimated the seismological activity in the area. As a result of these oversights, cheap buildings were constructed without any consideration for a potential earthquake.

On the subject of forecasting, worth particular mentioning is the contingency plan which was made prior to the Neftegorsk earthquake. The EMERCOM headquarters and its Far East and Siberian regional centers had collected data which indicated there would be a major earthquake on the Kamchatka peninsula. The seismological data suggested that the earthquake would most likely strike in the fall of 1995. High federal government officials reviewed the findings and praised the contingency plan (Shoigu and Vorobyov, 1995). However the earthquake actually occurred somewhere else, and therefore the aforementioned contingency plan had to be substantially changed.

As for the warning system, the town of Neftegorsk was somehow excluded from the Sakhalin network. This warning system was organized in 1980 and incorporated 242 electric sirens, 38 broadcasting stations, 34 circular warning consoles, and a number of radio and TV networks. This central warning system could notify 75% of the population in Sakhalin within two minutes and 85% within five minutes. The system could reach in total 95% of the region's residents (Kaznacheev, 1995; Komandirov, 1995). Yet, Neftegorsk was part of this 5% which was not in the central warning system. Thus the residents of Neftegorsk had to be notified by telephone. Yet this method was unreliable since Neftegorsk only had one telephone cable system with no back-up system in the event of a malfunction. When and if a major disaster hits (like a big earthquake), there is a high risk that the cables will break and the automatic telephone stations will be knocked out. This is exactly what happened in Neftegorsk.

OPERATIONAL MANAGEMENT: THE IMMEDIATE IMPACT OF THE EARTHQUAKE

The political, institutional, geographical and socio-economic situation in northern Sakhalin to a large degree determined the severity and the nature of the 1995 disaster. Meanwhile, the contingent con-

ditions and agents of this event (both physical and social) significantly influenced the response, the decision-making and the measures implemented.

The earthquake struck late at night at 1:04 a.m. local time on May 28, 1995 (5:04 p.m. MT or 1:04 p.m. GMT on May 27, 1995, respectively) with a magnitude as high as 9.0 on the Richter scale at the epicenter in the Sea of Okhotsk. On the mainland, it varied from 7.1 in northern Sakhalin (in general) to 7.6 in the most affected areas (i.e. Neftegorsk). These figures were almost as high as those recorded in Spitak in 1988, Northridge in 1994 and Kobe in 1995.

Because of the area's low population density, the earthquake in Sakhalin affected fewer people and resulted in less economic damage in absolute figures compared to similar earthquakes. The direct economic losses amounted to only US$ 500 million compared to US$ 13,000–20,000 million in Northridge, US$ 15,000–20,000 million in Armenia and more than $ 100,000 million in Kobe (Aizenberg et al., 1995; Arnold, 1995; Comfort, 1994). In other words, the economic damage ratio was 1:33:35:200 (Sakhalin, Northridge, Armenia, and Kobe respectively), and the casualty/homeless ratio was 1:16:43:170 (respectively).

However, the combination of social time and space in regards to the Neftegorsk earthquake was unfavorable. The earthquake struck at night, which meant nearly all of the residents were inside asleep. Some of the younger Neftegorsk residents were at the local dance club which was completely destroyed by the quake. If the earthquake had struck during the day, there would have most likely been fewer people indoors. In addition, the earthquake occurred on the weekend when many workers from the neighboring oil fields were home from their weekly shifts. Likewise, the earthquake struck just as summer vacation was beginning and many children were visiting their friends and relatives in Neftegorsk. Apparently several of the children had arrived just before the quake. The earthquake hit in late spring, which meant the low night temperatures considerably worsened the situation for the people trapped in the ruins. And lastly, Neftegorsk was hit with aftershocks the next night. This aggravated the situation further for the hundreds of people already trapped under the rubble.

All of the 17 residential buildings (with 80 apartment units in each) were demolished by the earthquake. Similarly, the local hospital, school, boiler, bakery, police office and dance club were completely destroyed. The buildings constructed between 1979–1983 in accordance with the revised building codes seemed to be more robust and just a few of those buildings were partially damaged. Interesting enough the situation was quite similar in Kobe, where 66% of the older and only 3% of the newer buildings were wiped out (Great, 1995; Koff, 1995; Sasayama, 1996). The construction of the older buildings in Kobe was substantially different because when they collapsed they produced a dense pile of rubble with very few air pockets. This greatly reduced the chances of finding survivors. This issue reappeared five years later when an earthquake hit Izmit, Turkey. In contrast, the flat-slab design and more accurate construction of residential buildings in Mexico proved their worth in 1985 when an earthquake hit and completely leveled the buildings, but still provided many air pockets which increase the chances for survivors.

The Neftegorsk earthquake knocked out all of the bridges connecting Neftegorsk to Okha. There were significant breaks in the communication lines, the electrical grid, and the oil and gas pipelines. In Neftegorsk alone, the direct economic losses accrued from damages to residential buildings and the infrastructure exceeded US$ 100 million (Aizenberg et al., 1995; Goncharov and Melnikov, 1995; Koff, 1995; No author, 1995b; Shoigu and Vorobyev, 1995; Zaitsev, 1995).

The Decision-Making Occasions and Implemented Measures: A Functional and Institutional Analysis

The unique factors of the affected area substantially influenced the occasions for decision-making and implemented measures. Similarly, these factors determined the framework and the effectiveness of the organizational response.

EARLY NOTIFICATION AND WARNING SYSTEMS

The organizational framework and the existing practices in Russia emphasize early notification and warning systems. They are consid-

ered to be the cornerstone of crisis preparedness and early response. Yet when the Neftegorsk earthquake occurred, the local community and local authorities had not been forewarned. Vital information concerning a potential earthquake in the area had not been spread.

EMERCOM's federal and regional centers had received a notification of the earthquake at 5:46 p.m. MT on May 27, 1995, or 42 minutes after it hit (according to the Ministry of Defense seismic stations). However, no immediate data was available on its severity. The lack of critical information drastically limited the possibilities for preparing an appropriate and timely search and rescue operation.

The delayed notification was, in part, provoked by the disastrous nature of the earthquake. It had disrupted communication lines and had completely destroyed important strategic facilities (including command and communication posts, the police office, the emergency medical center and so on). Similarly, many of the people trained to respond to such disasters had been killed or seriously injured by the quake. For instance, nearly two thirds of the police force and medical staff in Neftegorsk had been killed, and countless others had been injured. The fact that the staff operating the regional warning network was also hit had a big impact on the response stage especially considering the limited sources the small town had (see Porfiriev, 1998: 136–139). In addition, the regional authorities failed to activate the regional warning system "since the earthquake was unexpected" (Komandirov, 1995).

The first information with specifics about the earthquake came from two police officers a few hours later. One of them, Sergeant Glebov, had managed to escape after his apartment building crumbled to the ground. Despite serious injures, he managed to find his way out of the ruins all by himself. He later found three of his colleagues who had been on duty when the earthquake hit. They had been able to escape major injuries when the police building collapsed. They found an undamaged car and the sergeant used it to drive to the closest settlement, Sabo, 20 km away. The road to Sabo was heavily damaged and it took the sergeant several hours to make the 20 km to Sabo. Once in Sabo, he was able to find a telephone in working condition and he called the district authorities in Okha to inform them of the tragedy.

The impact of the earthquake had been less severe in Sabo. The police commander of Neftegorsk (and Glebov's superior), Major Novoselov, lived in Sabo. He and his family had survived the quake. Major Novoselov immediately got in his car and drove to Neftegorsk (at the same time that Sergeant Glebov was on his way to Sabo) in order to find out what had happened there. As Major Novoselov approached Neftegorsk, he saw a glow of fire off in the distance, some 20 km away, and he immediately assumed that the oil mining facility had caught on fire. Right away he sent a radio message to his superior in Okha and then headed for the oil fields which were located on the outskirts of Neftegorsk. When he reached the oil fields, he found no fire. The facility had been slightly damaged and had been abandoned by its three operators. He headed back for Neftegorsk and realized that the fire was coming from two buildings in town. He was overwhelmed by the sight of complete destruction. Many people had been immediately killed by the earthquake and he could cries from the ruins. There were several shocked survivors trying to find their relatives and neighbors in the ruins with their bare hands. Major Novoselov sent a new radio message to his superior in Okha correcting his previous alarm about the burning oil facility. Since the connection was so bad, Major Novoselov said he would call him back in Sabo with more details. When at last he reached Sabo, Major Novoselov met Sergeant Glebov who had already called the authorities in Okha.

At that time, the Okha municipal authorities were trying to get the situation in their own city under control. Okha had experienced quakes up to 4.0 and 5.0 degrees on the Richter scale. Fortunately, only some of the buildings had cracked and none of the 37,000 Okha residents had been injured. From Sabo, Major Novoselov called both the Okha emergency staff and the Deputy Chief of the municipal road construction company, which could repair the roads in order to help facilitate the rescue operation. However, neither of the two officials believed the initial alarm set by Sergeant Glebov; nor did they trust Mayor Novoselov when he called a couple of minutes later. It took some 40 minutes for the Okha officials to make a decision to send a helicopter to the disaster site in order to verify the messages. After receiving a confirmation, the Deputy Chief of the municipal road construction company then sent equip-

ment to Neftegorsk to be used for repairing the damaged roads and infrastructure.

Once the Okha municipal authorities received a field report from the scouting teams, they forwarded a message on to the regional authorities in Yuzhno-Sakhalinsk who also felt the need to double-check these claims before contacting the EMERCOM headquarters in Moscow. The headquarters received the notification at 1:50 a.m. MT (9:50 local time) on May 28, 1995. The only government agencies truly capable of providing adequate help (i.e. the regional and federal authorities), did not know the severity of the earthquake for almost eight to nine hours after the fact. This does not mean, however, that they did not know anything about the earthquake as such. As mentioned before, the EMERCOM Regional Center in Khabarovsk and the Federal Emergency Operation Center in Moscow were aware of the earthquake as early as at 5:46 p.m. on the previous day. Yet even that notice was delayed by more than 40 minutes (Dibskiy and Trofimov, 1995).

The lack of a timely warning and an early notice to the local/regional communities and the urgent response agencies resulted in a substantial delay. First of all, this made it difficult to correctly assess the situation and thus decide what kind of response action should be taken Secondly, the remoteness of the affected area caused a delay in the search and rescue operations by as much as 17 hours. For the sake of being fair, a total delay was unavoidable considering the cut in the communication system and the remoteness of the affected area.

For example, there was also a significant delay in Japan when the Great Hanshin-Awaji earthquake occurred in January 1995. In took four hours before the Governor of the Hyogo prefecture asked for help from the Japanese Defense Forces, which needed another five hours to mobilize. Moreover, the Japanese Defense Forces arrived in Kobe nearly two days after the earthquake. The Japanese Prime Minister, Murayama, confessed that the lack of preparedness and bureaucratic bungling significantly delayed the response efforts (Arnold, 1995; Sasayama, 1996). The same happened with the Neftegorsk disaster when the considerable delay adversely affected the effectiveness of the search and rescue work and the emergency medical care.

SEARCH AND RESCUE OPERATIONS: THE ROLE OF EMERGENT AND BROAD-BASED ORGANIZATIONS

According to Dynes and Quarantelli's model on organizational response, when a disaster hits there are four types of organizations which get involved:

- Type I – already established or institutionalized organizations, which carry out routine tasks (police, emergency medical care and professional search and rescue units);
- Type II – broad-based organizations with routine tasks (like the Red Cross);
- Type III – external or peripheral organizations with non-routine tasks (construction and transportation companies which help clear debris and assist in evacuation); and
- Type IV – emergent groups which are composed of professionals involved in non-routine tasks.

According to the model, "a sudden onset disaster [like that in Neftegorsk][21] would involve Type I and II organizations in rapid mobilization, quickly followed by Type III organizations and the rapid emergence of Type IV" (Dynes, 1998: 119; Stallings, 1978: 91).

Despite the lack of a timely warning and primary data on what had happened, the situation in Neftegorsk was substantially changed by the presence of emergent or quasi-emergent groups which played a leading role in the first few hours. Small groups of people (some containing up to 120 people) began the first rescue efforts. They tried with just their bare hands to find their relatives and neighbors buried beneath the ruins. A few hours later some people from the town of Sabo, who had heard about the tragedy in Neftegorsk from Major Novoselov and Sergeant Glebov, rushed to help their relatives living there and joined the emergent groups. However, the rescue efforts were chaotic and unprofessional. It was dark and the only lighting they had was from a few car headlights. Among the worried relatives rushing to Neftegorsk from Sabo, there were a few looters who obviously had no interest in helping the rescue efforts. Given the unfavorable circumstances, the rescue efforts were not very effective and just a few people were saved.

[21] Author's own example.

In addition to the emergent groups involved in the rescue operations, there was a group of four policemen. Three of them had been slightly injured when they had made their way out of the cracked police building where they had been on duty. The fourth policeman was the aforementioned Sergeant Glebov, who had been more seriously injured after his apartment building had completely collapsed. All of the other Neftegorsk policemen were killed by the earthquake.

Given these circumstances, one could define this small collective as an emergent group and as an established/institutionalized unit. Thus it could be referred to as a quasi-emergent group. Such a group complies with Quarantelli's description of the emergency phenomena as "new, novel, non-traditional and non-routine" which is partly rooted in and arises from pre-existing structures, functions and roles (1991: 74). This was certainly the case for this quasi-emergent group since all four people had worked together as policemen. This explains why they were more professional and effective in their rescue efforts than the purely emergent groups.

These four policemen conducted a primarily investigation of the disaster site. Sergeant Glebov then reported the findings from Sabo via telephone. The policemen came across two burning hoses caused by a gas leak from a broken pipeline. So the sergeant made a special stop on his way to Sabo from Neftegorsk and closed the gas valve. His three colleagues managed to find the head of the Neftegorsk municipal government, who had also succeeded in escaping serious injury. She tried to introduce some order by trying to organize the chaotic rescue efforts. The four policemen assisted her in these activities and tried to maintain public order (i.e. measures against looting).

A few hours later, on the morning of May 28, one more group of crisis management actors joined the rescue efforts. This group consisted of workers from the *Sakhalinmorneftegaz* oil and gas facilities and from the local road construction company in Okha (a Type III or external/peripheral organization). Miners, operators and others left their work places and hurried back home to their families immediately after the impact. When they saw their homes completely destroyed and realized that their family members were buried under the ruins, they quickly returned to work and came back with mining equipment (i.e. bulldozers and cranes). The bulldozers and

cranes along with trucks from the road maintenance and construction company in Okha provided significantly more lighting which greatly helped the search and rescue work. The workers from the local road maintenance and construction company contributed over 120 pieces of equipment including welding units and chisels.

The workers from *Sakhalinmorneftegaz* and the local road construction company did not form their own independent rescue team. Rather they joined the existing emergent groups thus creating some sort of mixed "emergent-external/peripheral" group (Type II and Type III). Unfortunately, the chaotic and unprofessional efforts of the emergent groups could not replace specially trained rescue workers despite the fact that the new group members from the local road construction company had some general rescue training and useful equipment. Although these efforts helped to save a few people from the ruins, the situation for the others still trapped deep under the rubble was actually worsened (and some were even killed). The bulldozers and the small cranes were not powerful enough to lift the big concrete slabs so they just pushed the debris. This resulted in fewer air pockets in the rubble.

For the most part, the employees of the local road maintenance and construction company from Okha had more relevant work experience and thus were able to act more professionally. This group could be categorized as a Type III group (an external/peripheral group). They joined the rescue operation a few hours later because the company's director did not trust the early calls from the policemen. It also took them some time to reach Neftegorsk from the towns of Okha and Nogliki after the company's top management finally issued an order to act.

By 10:00 am local time (MT 2:00 a.m.) on May 28, more than 390 workers with special equipment and trucks came to Neftegorsk and started repairing the damaged roads in order to help facilitate the transportation of professional rescue teams and the other emergency forces. Later that day, they successfully restored some of the basic community services, repaired the phone system and set up temporary camps and kitchens in order to provide hot meals for the victims and the professional rescue workers who arrived later (Yurin, 1995).

In short, the early response operations were activated within about 12–14 hours after the earthquake. The official crisis manage-

ment team from the regional center (in Yuzhno-Sakhalinsk) arrived in Neftegorsk around 6:00 p.m. local time (10:00 a.m. MT) on May 28. Another team left Yuzhno-Sakhalinsk for Okha at 2:00 p.m. local time (6:00 a.m. MT) on May 28, and was composed of more than a dozen regional officials from the regional administration and the *Duma* (the legislative body) headed by Governor Farkhutdinov. With them came five rescue workers from the Sakhalin regional search and rescue services and eight physicians. The team assessed the situation and organized a commission to be responsible for making decisions and to oversee the implementation of various measures.

As the Regional Duma Chairman Maksutov said:

> It's a catastrophic earthquake, much worse than that on the Kuril Islands in 1994. We set up a commission to immediately provide urgent response measures. These measures included clearing the ruins, and assisting the trapped people and providing them with medical care and temporary housing. Contrary to the situation in the Kurils, now we have the necessary equipment to save people.

This high official's assessment of the crisis alleviation on Sakhalin Island was erroneous. There was not enough equipment or resources for the rescue work. Support should have been strengthened from the regional level and supplemented soon thereafter by the federal level (primarily EMERCOM).

RESCUE WORK, FIRE FIGHTING AND MAINTAINING PUBLIC ORDER: THE CONTRIBUTION OF ESTABLISHED/ INSTITUTIONALIZED ORGANIZATIONS

The established/institutionalized organizations and the broad-based organizations did not get involved in Neftegorsk until after the emergent, quasi-emergent and external/peripheral groups had started the search and rescue operations. The first established/institutionalized organizations to get involved were the urgent response police and fire units from the Okha district and the Sakhalin region, and the rescue units from Khabarovsk (representing the local and regional authorities as well as EMERCOM's regional center).

Around 11:00 a.m. local time (3:00 a.m. MT), a joint police and military unit (similar to the National Guard) of 364 servicemen arrived in Neftegorsk from Yuzhno-Sakhalinsk (the regional center) and Okha (the district center). This unit assisted the four local policemen in the rescue operations in maintaining public order, in establishing road check points and patrolling the area. In the next few days the local policemen were actively involved in identifying the corps since some families had been entirely wiped out and many bodies had been so severely mutilated that only the local policemen could identify them. Such is only possible in a small town where everybody knows everybody. The police collected and kept an inventory of the documents and personal belongings found in the ruins. These items were kept safe until they could be returned to the original owners or their relatives.

Despite the fact that the local police office had been completely destroyed and nearly 70% of the local police force had been killed, social order was effectively maintained in Neftegorsk throughout the disaster. On the first day, the police patrols were able to stop seven looting attempts and arrested the criminals. The total number of criminal acts amounted to 11 in Neftegorsk (Chinarov, 1995; Ostrovskaia et al., 1995; Appendix 6.1). This is worth special mentioning since the social domain of crisis management in Russia is unique compared to that in the West. In general, US disaster sociologists believe looting is uncommon during natural calamities (see Dynes and Quarantelli, 1968; Quarantelli, 1992a/1992b). No looting was mentioned in connection with the earthquakes in Mexico, Northridge or Kobe. Thus the Neftegorsk case reveals quite a different experience on this issue and requires further investigation.

In addition to the police and the National Guard-like units, active components from the established/institutionalized organizations engaged in the disaster response also assisted in the fire fighting. Three fire squads from the Okha district entered the rescue operation late in the game and started extinguishing the fires as late at 5:00 am on May 28. The next day, a special team with 13 firefighters from the regional fire services who were equipped with rescue equipment reinforced these units which intensified the fire fighting operation in the affected area. From May 28 to June 9, the state fire service units (i.e. from the regional level) successfully extinguished 13 fires, rescued residents from one of the destroyed buildings, and

helped remove debris. In total, 92 people (of which 17 were alive) were salvaged from the rubble (Gerasimova, 1995; Mikeev, 1996; see also Appendix 1).

Around 9:00 a.m. local time (1:00 a.m. MT) on May 28 the first rescue unit from EMERCOM's regional center in Yuzhno-Sakhalinsk came and was soon followed by one more unit. These units were poorly equipped and often used no more than their belts and bare hands to remove the heavy blocks (Chinarov and Dzyuba, 2000).

A rescue team from Khabarovsk arrived at 12:30 p.m. local time (4:30 a.m. MT) and proved to be quite important. The helicopter, which left Khabarovsk for Neftegorsk at 8:15 a.m. MT, delivered eight rescue workers with special equipment (including an electric generator). For many hours this was the only reliable powerful source of light at the disaster site during the long and dark nights; a fact particularly stressed by both the local residents and the media.

The team from Khabarovsk was reinforced by 41 people from Yuzhno-Sakhalinsk and 10 more from Kamchatka. These included five rescue workers from the regional Sakhalin search and rescue services which also had eight physicians along. They and the governor's team arrived sometime around 6:00 p.m. local time on May 28. The rescue unit from Kamchatka alone freed 42 people from the rubble within the first few days (Osokin, 1995). Early in the morning on May 29, all of these teams were joined by the EMERCOM units from Moscow. One EMERCOM unit (which had left Moscow for Okha at 6:50 a.m. MT) consisted of eight rescue workers, six surgeons, and thirteen servicemen from EMERCOM's Central Airmobile Unit (CENTROSPAS). The EMERCOM Operation Task Force, headed by the EMERCOM Minister himself and consisting of 23 rescue workers from CENTROSPAS, left at 8:45 a.m. MT on May 28. The EMERCOM crisis management center in Moscow and its Far East regional center in Khabarovsk worked non-stop from 12:40 MT (8:40 p.m. local time) on May 28 until the end of the rescue operation (see Dibskiy and Trofimov, 1995; Koff, 1995; Shoigu and Vorobyov, 1995).

To sum up, the strength of the rescue, medical and police units from the regional and federal levels sharply increased on the evening (local time) of May 28. Within just 24 hours (i.e. from May 28–29), the number of rescue personnel and equipment quadrupled and doubled, respectively. After May 30, the combined units amounted

to roughly 1,600 individuals (including more than 600 professional rescue workers), 190 pieces of machinery, 20 aircrafts, and 15 helicopters (Shoigu and Vorobyov, 1995).

The concentration of emergency personnel and equipment in Neftegorsk was extraordinary. Calculations reveal that the relative number of workers involved in the search and rescue operation per 1,000 of the population reached 500 in comparison with only 19 in Kobe. Thus the ratio between these figures is as large as 26:1. Likewise, the ratio for doctors and nurses soared to 56:1 and the relative number of policemen was also higher than in Kobe (see Appendix 1).

MEDICAL CARE AND HELP TO THE DISPLACED RESIDENTS: THE CONTRIBUTION OF THE ESTABLISHED/INSTITUTIONALIZED AND BROAD-BASED ORGANIZATIONS

The emergent, quasi-emergent and external/peripheral groups dominated during the first hours of search and rescue operations but the broad-based organizations played a key role in fire fighting. At the same time, the established/institutionalized and broad-based organizations were the primary crisis management actors in the terms of medical and health care, transporting the injured and providing help to all of the displaced residents during the entire crisis. The medical teams from the neighboring communities played a major role within the established/institutionalized organizations since the earthquake had killed most of the medical personnel and had severely damaged the medical facilities in Neftegorsk. The units of the All-Russian Emergency Medical Care Center were the leaders among the broad-based organizations (Goncharov and Melnikov, 1995).

Sometime around 11:00 a.m. local time (3:00 a.m. MT) on May 28 the first medical team of circa 10 people came to the disaster site from Okha. Twelve additional people including seven doctors and five assistants from the neighboring town of Nogliki came an hour later. These two teams worked together for about three to four hours and provided emergency medical care to between 80 and 100 people before the medical team from the Far East Emergency Medical Regional Center in Khabarovsk arrived at 1:40 p.m. local time (5:40 a.m. MT). By that time, the number of physicians working in the disaster area had reached 40 including those from Yuzhno-Sakhalinsk. The number of people who had received medical care

increased to more than 120 (including 107 who had been seriously injured and were later moved to Okha).

On May 29, the medical brigade from the All-Russian Emergency Medical Care Center *Zaschita* provided high-level professional assistance. They were well-equipped with specialists experienced in working under such harsh conditions. In addition, about 28 tons of medical supplies arrived from Surgut, Ufa, Perm, Khabarovsk, Vladivostok and other Russian cities. More than 342 tons of this had been provided by foreign countries and various international organizations. Two mobile medical posts with six rotating medical teams worked directly on-site in Neftegorsk, and another mobile facility with 40 physicians and 28 nurses provided medical assistance in Okha (Gvozdikov, Litovkin and Ostrovskaia, 1995). In total, 510 people (of which 180 were children) received medical assistance. The field hospital established by *Zaschita* was located only 20 m from the ruins (Goncharov and Melnikov, 1995; Shoigu and Vorobyov, 1995).

Additionally, the Sakhalin, Khabarovsk and Primorsk regional administrations substantially contributed to organizing the transportation and hospitalization of 203 patients in clinics throughout Okha, 98 in Khabarovsk, 43 in Vladivostok, 40 in Yuzhno-Sakhalinsk and 1 in Nogliki. One very seriously injured person was transported and hospitalized in Moscow. The regional authorities also took active measures to provide assistance to those who had been displaced; 72 people were relocated to Okha and 51 to Yuzhno-Sakhalinsk (Shoigu and Vorobyov, 1995).

The epidemiological situation in the disaster area was complicated by the multiple interruptions in the area's lifelines (primarily water and sewage systems) and many human and animal corpses were scattered among the ruins. On May 29, a special team of 14 people from the Sakhalin State Sanitation and Epidemiological Inspectorate began helping the locals deal with such issues. The team thoroughly tested the water and food, and prepared burial places so that the epidemiological situation in the disaster area was kept under control (Goncharov and Melnikov, 1995).

FEDERAL AND INTERNATIONAL RELIEF

After receiving the first message about the earthquake from EMERCOM at 8:06 a.m. MT on May 28, the President of Russia was continuously updated on the progress of the rescue operation. On May 30, the President appeared on national television to express his condolences to the families of the victims and to declare the following day a national day of mourning.

The federal government was the key crisis manager in terms of organizing and providing federal disaster relief. Having received the news early in the morning on May 28, the Council of Ministers of the Russian Federation immediately issued an executive order, which established the Inter-Organizational Government Commission for Emergency Prevention and Liquidation headed by the EMERCOM (Minister, S. Shoigu). This commission was responsible for serving as the principal coordinator for the international, federal, regional and local executive bodies involved in estimating the amount of relief needed, and for organizing the necessary measures for alleviating the aftermath of the earthquake in the Okha district. Aid was of particular concern for the commission. By July 13, 1995, about 441 tons of humanitarian aid was collected from the other Russian regions and from abroad. The bulk of this (77%) was provided by more than 100 foreign countries and international organizations, totaling: 118 tons of equipment and material, 114 tons of medical supplies, 76 tons of food items, and 35 tons of clothes (Shoigu and Vorobyov, 1995).

The executive governmental order also entrusted the Ministry of Finance to allocate an additional 30 billion rubles (about US$ 7.5 million) to EMERCOM in order to support the search and rescue operations and the medical services. The State Committee for Material and Technical Reserves (*Goskomreserv*) and the Ministry of Transport and Railways were responsible for providing supplies and for transporting equipment and rescue workers. From the federal relief fund, a lump sum of 1.0 million rubles (approximately US$ 250) was provided to each affected person; the first 93 men and women received this as early as June 1, 1995 (Pravitelstvo. Rasporiazheniye, 1995a; Neftegorsk, 1995a). Federal compensations are quite common in Russia because regional funds are scarce, especially in the less developed regions (such as the Far East). Another reason why

the federal government issues compensation is because the private insurance industry in Russia is grossly underdeveloped.

Just after the aforementioned order was signed, the Federal Governmental Commission (the top officials from the ministries and the state committees for health, transport, railways and construction) arrived soon after the EMERCOM Operation Task Force. The findings from the on-site assessments were used to prepare five governmental directives (regulations and executive orders) in order to provide adequate guidance for federal relief in Neftegorsk (Agafonov, 1996).

The government of Russia issued two regulations and one executive order on June 2 and June 3,1995 (respectively), which channeled the flow of financial aid totaling 107 billion rubles (about US$ 27 million) to the Sakhalin region (Pravitelstvo. Postanovleniye, 1995a; Pravitelstvo. Postanovleniye, 1995b; Pravitelstvo. Rasporiazheniye, 1995b). In addition to the individual compensation of 1.0 million rubles (US$ 250), these documents governed the allocation of a lump sum of 5.0 million rubles (about US$ 1,200) to each family for burial expenses. An additional 50 million rubles (about US$ 12,000) was allocated for lost property and for the death of a family member. Although these allowances and compensations were insufficient in terms of amount (less than 2.5 million rubles to each), 889 people had received some sort of financial support by June 6, 1995 (Gvozdikov, 1995a).

Two documents (both signed on June 5, 1995) specified the adoption and implementation of governmental regulations regarding the issue of liquidation after the earthquake. In addition, an executive order was passed on financing the search and rescue operation and repairing the oil and gas facilities in the affected area. The documents called upon the respective federal and regional executive bodies to assess the damages and the costs for rebuilding and relocating the Neftegorsk residents. The reconstruction of the infrastructure and the industrial facilities at *Sakhalinmorneftegaz,* and the development and implementation of the federal mitigation program were mentioned. Moreover, the issues of reopening the seismological stations and improving the accuracy and precision of seismological zoning in Sakhalin were also discussed (Pravitelstvo. Postanovleniye, 1995c).

In addition, the Russian government provided some tax breaks and some other privileges totaling 465 billion rubles (over US$ 100 million) to *Sakhalinmorneftegaz* in order to help compensate its losses. These expenses exceeded hundreds of billion rubles in 1995 alone and was anticipated to reach nearly 1,000 billion (about $210 million) the following two years, 1995–1996 (Baskaev, 1996).

Given the complete destruction of Neftegorsk *per se*, the Russian government decided that the town would not be rebuilt and that the surviving residents would be relocated within the Sakhalin region, namely to the cities of Okha, Yuzhno-Sakhalinsk and Nogliki (Tsarev, 1995b). The survivors and the people in the neighboring communities consented to the idea of relocating, even though that was quite painful and stressful in itself. The Sakhalin regional and Okha municipal administrations along with *Sakhalinmorneftegaz* provided funds for building 71 and 12 apartment units, respectively, which, were undoubtedly insufficient for the 500 affected families. Financial support was also earmarked for the relocation of 183 families who wished to move to the mainland.

However, the implementation of these plans was considerably limited by bureaucratic red tape, corruption, and the lack of funds. Not surprising, only half of the victims had received full compensations as late as two months after the earthquake (Gvozdikov, 1995b; Drouzhinin, 1995).

The situation considerably worsened in January 1996 when another earthquake (6.1 on the Richter scale) struck northern Sakhalin and severely destroyed 14 buildings leaving 800 families homeless (Ostrovskaia, 1996). Given the fact that the 1996 Federal Budget Act lacked funding for the Neftegorsk disaster, the new disaster only made matters worse. As a result, the federal budget was pushed further into debt by over 135 billion rubles (US$ 30 million). The overall demand for funding for the aftermath of the Neftegorsk disaster alone (without considering the earthquake that occurred in January 1996) has soared to 458 billion rubles (about US$ 90 million) (Baskaev, 1996).

Conclusion

THE EFFECTIVENESS AND DISTINCTIVENESS OF CRISIS MANAGEMENT IN NEFTEGORSK

Undoubtedly the rescue of more than 400 people should be considered the main achievement of the crisis management efforts after the earthquake hit in Neftegorsk. Contrary to the situation in 1988 in Spitak (Armenia), where the Soviet crisis management system was incapable of managing a large-scale search and rescue operation in a remote area, the Neftegorsk disaster in 1995 revealed that the organizational response in contemporary Russia was much more effective.

The newly established USEPE system was put to the test for the first time. It proved that it was better coordinated and more operative than the one in the former Soviet Union. EMERCOM rescue workers (especially those from the regional centers and the doctors from the All-Russian Emergency Medical Care Center *Zaschita*) served as a nucleus for the search and rescue operation and the emergency medical care in the disaster area. Together with municipal medical teams and fire fighting units from the Sakhalin regional department of the Russian Ministry of Interior, they represented 42% of the total response personnel. Thus the established/institutionalized organizations (and to a lesser degree the broad-based organizations) were the key crisis management actors in Neftegorsk. The emergent and quasi-emergent groups accounted for 31% of the total emergency response. The external/peripheral groups (mainly composed of the *Sakhalinmorneftegaz* workers and the servicemen from the Far East district of the Russian Ministry of Defense) made up the remaining 27%. Over 400 volunteers from the local communities whole-heartedly contributed to the rescue efforts and deserve special recognition (Osokin, 1995).

The local and regional organizations provided over 70% of the people directly involved in crisis alleviation in Neftegorsk. This implies that the bulk of the actual disaster response was locally administered; whereas the management of the crisis was largely administered by the federal government representatives (mainly EMERCOM). Thus it can be argued that the Neftegorsk disaster response was fairly balanced in terms of decentralized and centralized forces. In contrast, after the 1988 Spitak earthquake in Armenia the fire

fighting activities were locally managed in the field (Wyllie and Filson, 1989). In Neftegorsk, all of the fire fighting activities after May 30 were commanded by regional and federal coordinating officers. In particular, the regional fire service in Yuzhno-Sakhalinsk and the federal fire service in Moscow oversaw the operations.

Within the newly established USEPE system, this balanced approach provided intensive and effective search and rescue activities under extremely difficult conditions. During the first day (May 28, 1995) 150 people were pulled from the rubble. The next day this figure increased by 30%. After two more days it doubled and more than 300 people were found in the ruins (more than half of them alive). Unfortunately, time ran out for the rescue workers and after June 4 no more survivors were pulled from the rubble. On June 10, the rescue operations were terminated. The total number of people salvaged from the rubble had soared to 2,364 (of which 406 were survivors).

LESSONS LEARNED

The progress achieved in the crisis management of the Neftegorsk earthquake should be considered as a partial success. Every disaster response provides important lessons, of both a practical and theoretical nature, for the future.

From the *public policy perspective,* the Neftegorsk disaster had a relatively low profile in terms of media coverage and had few political implications. The local and regional media (TV, radio and newspapers) provided regular although mainly emotional reports from the disaster site in the first few days of the disaster. Even months after the rescue work had been terminated, specific issues for the victims and specific shortcomings in crisis planning, preparedness and response were raised. The national press extensively wrote on the case the first ten days but then the news coverage became less regular and less descriptive especially in the later response phase and the early recovery stage. The TV coverage of the crisis lasted for less than a week. The Neftegorsk earthquake went almost unnoticed in the international media with just a handful of TV and newspaper reports (just a few lines in the first two or three days after the earthquake hit).

The policy implications primarily focused on the poor construction of buildings and the lessons for seismological mapping. The lessons centered on issues concerning loopholes in design, cutting corners, corruption and the low working morale. Comparisons were made with the earthquake disasters in Armenia in 1988, Taiwan in 1999 and Turkey in 1999. However, considering the fact that the buildings in Neftegorsk were constructed in the late 1960s during the Soviet Era, it is difficult to find and prosecute the responsible parties. According to older seismological research, Sakhalin had been incorrectly declared as a low risk area; another error which could not be blamed on any specific party. Consequently serious revisions were made to the existing seismological mapping of the Far East.

Despite the magnitude of the disaster, no one was officially blamed for the inadequate preparedness or for the delayed ineffective response. Some TV and newspaper interviews with those affected by the disaster and unsurprisingly revealed a loss of public confidence in the regional authorities. Yet those interviewed perceived the response efforts taken by the district and local authorities as adequate, and the respondents still have quite a bit of confidence in their abilities. However, the public has more or less simply internalized their negative feelings which has just added frustration and uncertainty to their everyday lives. These have been perceived by the local people as a result of the ongoing social and economic crisis both in the region and in Russia as a whole. In addition, many people are accustomed to the reality that many of the authorities and political VIPs simply escape responsibility and are not held accountable for their actions. So despite the criticism mentioned in the media interviews, the Neftegorsk earthquake disaster did not transform into a serious political crisis. The local and regional administrations in Sakhalin remained untouched.

From a *practical crisis management perspective*, the low level of preparedness and poor training at all levels was evident. During the response stage, the crisis management was delayed and often chaotic. In fact, the authorities initially questioned the earthquake warning from the local policemen. This is in no way unique or specific to just Russian but rather is a problem which exists in the crisis management culture.

As Lagadec correctly puts it, in order to cope with these issues, work must begin on more open-ended political concepts which in turn will pose a cultural challenge to decision-makers. The current mentality is "If it can't be proved (or hasn't been proven), then I don't need to do anything about it." Other acceptable strategies are used to limit information to the public such as, "If I talk about uncertainty, then everybody will just panic." Deep down they believe that the experts will come up with a solution. Unless properly trained, managers are programmed to fail in crisis situations (Lagadec, 1997).

This refers not only to the local and regional decision-makers but also to the federal executive bodies, in particular the EMERCOM federal and regional centers. Inconsistency and disruptions in the rescue operation became increasingly common among the federal authorities during the early and middle recovery stages.

Failures were evident in the area of financial aid and compensation to the victims and their families. Many factors contributed to this: the shortage of funding, loopholes in the redistribution of the budget, bureaucratism, the international economic crisis in the mid 1990s, the Soviet legacy, and the historical development of Russia. In March 1996 (two years after the Neftegorsk earthquake) as many as 280 families of the 740 displaced (or 37.8%) still did not have permanent housing. Moreover, as late as May 1999 (four years after the earthquake) the federal government still owed the communities in the Okha district almost 10.5 million rubles (some US$ 400,000) for property losses and over 70 million rubles (almost US$ 2.7 million) for home repairs (Dazhuntz, 1996; No author, 1999). This suggests that the housing problem for those displaced as a result of the 1995 Neftegorsk disaster and the 1996 Okha earthquake will linger well into the year 2002 before it is resolved (Kim, 1999).

Above and beyond those already mentioned, one could claim that the local and regional administrators are still suffering from the Soviet centralization syndrome. In general they are more inclined to appeal to the federal government rather than to the authorities in their neighboring regions. The fact is that the concentration of economic and administrative power is still in the hands of the federal authorities; a policy inherited from the Soviet power structure. This reveals poor coordination between the various levels of authority during all stages of the crisis (i.e. prevention, preparedness, response

and recovery). However, the widespread uncertainty and the lack of meaningful coordination between the various organizations and agencies are common in the early hours of a disaster (Rosenthal et al., 1994). Poor crisis training can only partly explains the shortcomings in the response to the Neftegorsk disaster.

One more practical management and policy lesson from this crisis concerns the technological backwardness of disaster preparedness and response in Russia. Obsolete and unreliable communication lines, the lack of seismological stations and early warning systems, and loopholes in the exchange of information adversely affected the response especially in the initial stage. Based on the available data for Russia as a whole, the amount of time needed to activate the USEPE response units in the mid 1990s varied from one and a half hours to ten days; this is far below the standards for a modern response organization.

In addition to communication and technological problems, there was a shortage of powerful cranes which symbolized the problems associated with the location and distribution of rescue equipment. The USEPE's forces and equipment are concentrated in the big cities (primarily at the EMERCOM regional centers); thus the capability of the rescue units in the more remote and difficult-to-reach areas of Russia are significantly limited. Luckily in the Neftegorsk case the oil and gas and the road construction companies in the region could provide trucks and busses for the rescue operation.

From a *theoretical perspective*, the main lessons learned from the Neftegorsk crisis largely deal with the organizational response model. This model has some similarities and yet some significant differences in comparison to the Dynes and Quarantelli model. The study of the alleviation policy in Neftegorsk revealed that most of the key elements in this model are applicable in this case as well. However, no less important are the deviations from that model. For instance, the issue of looting appeared in Neftegorsk, but is not believed to be typical for natural disasters.

One more specific feature of the Neftegorsk crisis management model was the sequence in which the main organizational types of crisis agents entered the response stage. Contrary to the Dynes and Quarantelli model, the organizational model used in Sakhalin reveals that emergent and quasi-emergent groups were the first crisis management actors to respond and played a very important role in

the crisis response. Various factors led to this (loopholes in preparedness, the lack of a warning system, and the delay in communication and decision-making). However, two other issues should also be emphasized.

First, the severity of the disaster disrupted the existing emergency plans and virtually wiped out the entire local rescue organization, which had a huge impact on the resilience of the local community. The crisis managers themselves became victims. This highlights the challenges of designing robust and sustainable disaster management systems. Potential emergent groups (that is, every adult community member) should be trained for improvising in the field in the event that a disaster strikes. Implementation of such a policy is not simple since it requires additional considerations and further exploration. It could be argued, though, that many of the existing training programs in several countries (including Russia) are much more factual and instructional in nature rather than oriented towards problem solving and improvisation. (For instance, see the special issue of *Contingencies and Crisis Management*[22] on crisis preparation and training).

Second, the uniqueness of rural/peripheral crises and crisis management should be investigated further. Neftegorsk is a typical case of these challenges:

- geographical remoteness,
- the lack of consideration in emergency planning and preparedness efforts,
- concentration of resources in the urban areas, and
- the fact that rural and more remote areas are undervalued and underfunded.

Crisis management in such areas needs to be explored, and is an important and relevant issue for crisis research. Likewise, more systematic and comprehensive case studies would contribute to a better understanding of crisis development and could be fruitful for reconsidering organizational response models.

[22] (2000) Vol. 8: No 4.

References

Agafonov, V. 1996. Dazhe iz katastrofi yapontsi umeyut izvlech vigodu. (Even Disasters are Profitable in Japan). *Izvestia*, January 18.

Aiszenberg, Ya., Koff, G., Rogozhin, E. and Sidorin, A. 1995. Predvaritelniy Analiz Resultatov Kompleksnogo Izucheniya Neftegorskogo Zemletriaseniya I Ego Posledstviy. (Preliminary Analysis of the Results from the Comprehensive Survey on the Neftegorsk Earthquake). *Federalnaia Sistema Siesmologicheskikh Nabliudenii I Prognoza Zemletriasenii. (Informatsionno-Analyticheskii Bulleten). Spetsialniy Vipusk 'Neftegorskoye Zemletryaseniye 27 (28) Maya 1995'*, pp. 225–234

Arnold, R.L. 1995. The Kobe Quake. *Disaster Recovery Journal.* (Special Issue of Electronic Journal).

Baskaev, K. 1996. Gazifikatsiya Dalnego Vostoka Pomozhet Preodolet Posledstviya Sakhalinskogo Zemletriaseniya. (Gazification of the Far East Region Would Help to Overcome the Sakhalin Earthquake's Aftermath). *Finansoviye Izvestia*, May 24.

Britton, N. 1987. Toward a Reconceptualization of Disaster for the Enhancement of Social Preparation. Pp. 31–56 in: Dynes, R., De Marchi, B. and Pelanda, C. (Eds.) *Sociology of Disasters*. Milano, Franco Angeli.

Chinarov, S. 1995. Maroderstvo – Slovo Voyennoye. (Looting is a Military Word). *Gubernskiye Vedomovosti*, June 17.

Chinarov, S. and Dzyuba, V. 2000. Vmesto Krana Soldatskii Remen'. (The Soldier's Belt Instead of Crane). *Gubernskiye Vedomovosti*, May 23.

Comfort, L. 1994. Risk and Resilience: Inter-Organizational Learning Following the Northridge Earthquake of 17 January 1994. *Journal of Contingencies and Crisis Management*, Vol. 2, No 3, pp. 156–170.

Dazhuntz, E. 1996. Suida uzhe Nikto ne Vernetsia. (Nobody Ever Comes Here). *Sovietskii Sakhalin*, March 26.

Dibskiy, K. and Trofimov, A. 1995. Srazheniye za Neftegorsk: Viigrali Mi Ego ili Proigrali? (The Fight for Neftegorsk: Was it Won or Lost?). *Segodnia*, June 28.

Drabek, T. 1986. *Human System Responses to Disasters: An Inventory of Sociological Findings*. Springer-Verlag, New York.

Drouzhinin, A. 1995. Pomosch Neftegortsam Idet, no Slishkom Medlenno. (The Relief Flows to the Neftegorsk Residents But Too Slow). *Finansoviye Izvestia*, October 20.

Dynes, R. 1974. *Organized Behavior in Disaster*. Newark, DE, Disaster Research Center, University of Delaware.

Dynes, R. 1998. Coming to Terms with Community Disaster. Pp. 109–126 in: Quarantelli, E.L. (Ed.). *What is a Disaster?* L.: Routhledge.

Dynes, R. and Quarantelli, E.L. 1968. Group Behavior under Stress: A Required Convergence of Organizational and Collective Behavior Perspectives. *Sociology and Social Research,* No 52, pp. 416–429.

Gerasimova, N. 1995. "Otboi Kogda Ispolnim Golg". ("Dismissed after the Duty Is Executed"). *Gubernskiye Vedomovosti,* June 10.

Goncharov, S. and Melnikov, V. 1995. Za Zhizn i Zdorovie Postradavshikh Borolas Meditsinskaia Sluzhba v Neftegorske. (Medical Personnel Struggled to Save Lives and the Health of the Affected). *Grazhdanskaya Zaschita*, No 10, pp. 36–38.

Great Hanshin-Awaji Earthquake: Damages and Response. 1995. *Stop Disasters*, No 23 (Winter), pp. 10–13.

Gvozdikov, V. 1995a. V Neftegorske Otmechayut Deviat Dnei. (Nine Days After the Tragedy Are Commemorated in Neftegorsk). *Izvestia,* June 6.

Gvozdikov, V. 1995b. Neftegorsk ... 40 Dnei. (Neftegorsk: 40 Days After). *Izvestia*, July 7.

Gvozdikov, V., Ostrovskaia, N. and Litovkin, V. 1995. "Chas Tishini" Pomog Uslishat Golosa Zhivikh. (Voices of Survivors Were Heard Thanks to a 'Silent Hour'). *Izvestia,* May 31.

Kallioma, l. 2000. Potriasti Nas Mozhet Tolko Zemlia. (The Earth Alone Can Shake Us). *Izvestia*, May 29.

Kaznacheev, N.V. 1995. Problemi Sviazi I Opovescheniya pri Razrushitelnikh Zemletriaseniyakh i Drugikh Prirodnikh Katastrofakh. (Communication and Warning Problems During Earthquakes and Other Natural Disasters). Pp. 103–106 in: *Uroki I Vivodi Sakhalinskogo Zemletriaseniya. Sbornik Materialov Nauchno-Practicheskoi Konferentsii, Moskva, 23–24 Octiabria 1995*. (The Lessons and Conclusions from the Sakhalin Earthquake. Proceedings of the Scientific and Practical Conference, Moscow, 23–24 October 1995). Moskva, EMERCOM.

Kim, A. 1999. Byurokraticheskiye Utriaski Srodni Zemletriaseniyam. (Bureaucratic Tricks Are Similar to Earthquakes). *Gubernskiye Vedomovosti*, November 10.

Koff, G. 1995. Oshibki Stoyat Dorogo. (Mistakes Cost a Lot). *Grazhdanskaya Zaschita*, No 11, pp. 40–43

Komandirov, A.V. 1995. O Sostoianii Sviazi i Opovescheniya Sakhalinskoi Oblasti i Rayonov Zemletriaseniya. (The State of Communication and Warning in Sakhalin Oblast and the Areas Affected by the Earthquake. Pp. 65–68 in: *Uroki I Vivodi Sakhalinskogo Zemletriaseniya. Sbornik Materialov Nauchno-Practicheskoi Conferencii, Moskva, 23–24 Octiabria 1995*. (The Lessons and Conclusions from the Sakhalin Earthquake. Proceedings of the Scientific and Practical Conference, Moscow, 23–24 October 1995). Moskva, EMERCOM.

Kouzmin, A. and Korac-Kakabadze, N. 1999. From Efficiency to Risk Sensitivity: Reconstructing Management Capabilities after Economic Rationalism. *Australian Journal of Emergency Management,* Vol. 14, No 1, pp. 8–19.

Kozlova, N. 1995. Zhiviye Uzhe ne Plachut. (Those Who are Alive Do Not Cry). *Rossiiskaia Gazeta*, June 6.

Lagadec, P. 1997. Learning Processes for Crisis Management in Complex Organizations. *Journal of Contingencies and Crisis Management*, Vol. 5, No 1, pp. 24–31.

Mikeev, A.K. 1996. Personal communication. January 21.

Nikolayev, A.V. 1995. Problemi Navedennoi Seismichnosti v Sviazi s Sakhalinskim Zemletriaseniyem. (Problems of Induced Seismically Related to the Sakhalin Earthquake). Pp. 144–146 in: *Uroki I Vivodi Sakhalinskogo Zemletriaseniya. Sbornik Materialov Nauchno-Practicheskoi Conferencii, Moskva, 23–24 Octiabria 1995*. (The Lessons and Conclusions from the Sakhalin Earthquake. Proceedings of the Scientific and Practical Conference, Moscow, 23–24 October 1995). Moskva, EMERCOM.

No author. 1995a. Neftegorsk: Poselok, Kotorogo Net. (Neftegorsk: A Ghost Town). *Grazhdanskaya Zaschita*, No 7, pp. 4–6

No author. 1995b. Treschina. (A Rupture). *Grazhdanskaya Zaschita*, No 8, p. 25.

No author. 1999. Den' Pamiati i Skorbi. (The Memorial Day to Sorrow). *Gubernskiye Vedomovosti*, May 29.

Osokin, B. 1995. Tragediya, Kotoruyu ne Zhdali. (Unexpected Tragedy). *Gubernskiye Vedomovosti*, June 8.

Ostrovskaia, N. 1996. Esche 800 Sakhalinskikh Semei Lishilis Zhilia. (800 Families are added to the Homeless). *Izvestia,* January 10.

Ostrovskaia, N., Zheludkov, A., Mikheev, V. and Urigashvili, B. 1995. Chislo Zhertv na Sakhaline Prodolzhaet Rasti. (The Number of Victims at Sakhalin Keeps Increasing). *Izvestia,* May 30.

Porfiriev, B. 1993. Uncertainty in Natural Hazards Prediction and Its Effect on the User Communities: Soviet Union Case Study. Pp. 49–56 in: Nemec, J., Nigg, J.M. and Siccardi, F. *Prediction and Perception of Natural Hazards*. Dordrecht / Boston / London, Kluwer Academic Publishers.

Porfiriev, B. 1996. Social Aftermath and Organizational Response to a Major Disaster: The Case of the 1995 Sakhalin Earthquake in Russia. *Journal of Contingencies and Crisis Management*, Vol. 4, No 1, pp. 218–227.

Porfiriev, B. 1998. *Disaster Policy and Emergency Management in Russia*. New York: Nova Science Publishers Inc.

Pravitelstvo Rossiiskoi Federatsii. Postanovleniye ot 2.06.1995 No 539 "O Poriadke Predostavleniya Edinovremennoi Materialnoi Pomoschi I Kompensatsionnikh Viplat Grazhdanam, Postradavshim v Resultate Zemletriaseniya v Sakhalinskoy Oblasti". 1995a. (The Government of the Russian Federation. Regulation 'Procedure of Providing Allowances and Compensations to the Citizens Who Suffered as a Result of the Earthquake in Sakhalin Region'). *Rossiyskaia Gazeta*, June 6.

Pravitelstvo Rossiiskoi Federatsii. Postanovleniye ot 2.06.1995 No 541 "O Finansovoi Pomoschi na Likvidatsiyu Posledstvii Zemletriaseniya v Okhinskom Rayone Sakhalinskoy Oblasti". 1995b. (The Government of the Russian Federation. Regulation 'Providing Financial Aid for Recovery From the Earthquake in Okha Rayon of the Sakhalin Region'). *Rossiiskaia Gazeta,* June 6.

Pravitelstvo Rossiiskoi Federatsii. Postanovleniye ot 5.06.1995 No 559 "O Merakh po Likvidatsii Posledstvii Zemletriaseniya v Sakhalinskoi Oblasti". 1995c. (The Government of the Russian Federation. Regula-

tion 'Measures to Recover from the Earthquake in Okha Rayon of the Sakhalin Region'). *Rossiiskaia Gazeta,* June 9.

Pravitelstvo Rossiiskoi Federatsii. Rasporiazheniye ot 28.05.1995 No 734-p. 1995a. (The Government of the Russian Federation. Executive Order # 734 of 28 May 1995). *Rossiiskiye Vesti*, May 30.

Pravitelstvo Rossiiskoi Federatsii. Rasporiazheniye ot 3.06.1995 No 739-p. 1995b. (The Government of the Russian Federation. Executive Order # 739-p of 3 June 1995). *Rossiiskiye Vesti*, June 6.

Quarantelli, E. L. and Dynes, R. R. 1977. Response to Social Crisis and Disaster. *Annual Review of Sociology*, No 2: 23–49

Quarantelli, E.L. 1966. Organization under Stress. Pp. 3–19 in: Bricston, R. (Ed.), *Symposium on Emergency Operations,* System Development Corporation, Santa Monica.

Quarantelli, E.L. 1970. Emergent Accommodation Groups: Beyond Current Collective Behavior Typologies'. Pp. 111–123 in: Shibutani, T. (Ed.). *Human Nature and Collective Behavior: Papers in Honor of Herbert Blumer*. Prentice-Hall: Englewood Cliffs.

Quarantelli, E.L. 1992a. *Organizational Response to the Mexico City Earthquake of 1985: Characteristics and Implications*. Preliminary Paper No. 187, Disaster Research Center, University of Delaware, Newark.

Quarantelli, E.L. 1992b. Urban Vulnerability and Technological Hazards in Developing Societies. Pp. 187–236 in: Kreimer, A. and Munasinghe, M. (Eds.) *Environmental Management and Urban Vulnerability*. Washington, D.C., World Bank.

Quarantelli, E.L. 1993. Community Crises: An Exploratory Comparison of the Characteristics and Consequences of Disasters and Riots. *Journal of Contingencies and Crisis Management*, Vol. 1, No 2, pp. 67–78.

Riabchikov, V. 1995. Kto Zakril Seismostantsii. (Who Closed the Seismological Stations). *Pravda*, June 7.

Rosenthal, U. 1990. Cross-National Approaches to Disasters and Disaster Research. Paper prepared for Research Committee on Disasters, World Congress of Sociology in Madrid, 9–13 July 1990. Leiden University.

Rosenthal, U., 1986. Governmental Decision Making in Crisis Situation: Decisions at Hectic Moment. Paper presented at XI World Congress of Sociology. New Delhi, India, August 18–22.

Rosenthal, U., Charles, M.T. and Hart, P. t' (Eds.) 1989. *Coping With Crisis: The Management of Disasters, Riots and Terrorism*. Springfield, Illinois: Charles C. Thomas Publisher.

Rosenthal, U., Hart, P. t', van Duin M.J., Boin, R.A., Kroon, M.B.R., Otten, M.H.P. and Overdijk, W.I.E. 1994. *Complexity in Urban Crisis Management: Amsterdam's Response to the Bijlmer Air Disaster*. London: James & James.

Sasayama, K. 1996. Keynote Speech of the Mayor of Kobe City at the 2nd International Conference 'Local Authorities Confronting Disasters and Emergencies'. Amsterdam, the Netherlands, 21–24 April 1996.

Scanlon, J. 1999. Emergent Groups in Established Frameworks: Ottawa Carleton's Response to the 1998 Ice Disaster. *Journal of Contingencies and Crisis Management*, Vol. 7, No 1, pp. 30–37.

Shlikova, E. 2000. Interview with D. Lisitsin, the head of the regional NGO "Vakhta Sakhalina" ("Sakhalin Watchdog"). Yuzhno-Sakhalinsk, March 2000. Special permission to use the questionnaires was granted by the author.

Stallings, R. 1978. The Structural Patterns of Four Types of Organizations in Disasters. Pp. 87–103 in: Quarantelli, E.L. (Ed.). Disasters Theory and Research. L.: Sage Publications Ltd.

Stern, E. 1999. *Crisis Decision Making: A Cognitive Institutional Approach*. Stockholm: University of Stockholm.

Sundelius, B., Stern, E. and Bynander, F. 1997. *Krishantering på Sveska – Teori och Praktik*. Stockholm: Nerenius & Santérus Förlag.

Svedin, L. 1999. *Crisis Mitigation and Community Resilience: The Red River Flood of '97*. Stockholm: The Swedish Institute of International Affairs.

Tsarev, I. and Zolotov, O. 1995a. Nu Chto Teper Skazat pro Sakhalin? (What Can We Say About Sakhalin Now?). *Trud*, May 30.

Tsarev, I. and Zolotov, O. 1995b. Ostrov Skorbi i Nadezhdi. (The Island of Sorrow and Hope). *Trud*, June 1.

Ulomov, V.I. 1995. Otsenka Seismicheskoi Opasnosti I Vremennaia Skhema Seismicheskogo Rayonirovaniya Sakhalina. (The Seismic Risk Assessment and the Interim Scheme of Sakhalin Seismological Zoning). *Federalnaia Systema Siesmologicheskikh Nabliudenii I Prognoza Zemletryasenii. Informatsionno-Analyticheskii Bulleten. Spetsialnii Vipusk 'Neftegorskoye Zemletryaseniye 27 (28) Maia 1995'*. Moskva, EMERCOM, pp. 18–26.

Vikulin, A. 1996. Kamchatka Izuchaet Uroki Neftegorska. (Kamchatka Draws Lessons From Neftegorsk). *Grazhdanskaia Zaschita*, No 8, pp. 92–93.

Wyllie, L.A. and Filson, J.R. (Eds.). 1989. Armenia Earthquake Reconnaissance Report. *Earthquake Spectra* (Special Supplement). August.

Yurin, D. 1995. Pervimi na Pomosch Prishli Neftianiki. (Oil Workers Were the First to Come to Help). *Sakhalinskiy Neftianik*, June 1.

Zaitsev, A. 1995. Neftegorsk – Nasha Bol. (Neftegorsk Is Our Pain). *Grazhdanskaya Zaschita*, No 10: 36–38.

Appendix 1
Disaster Profile and Disaster Response in Figures

SAKHALIN

Territory	76,000 km2
Population	700,000 residents
Population density	9,2 (persons/ km2)

SEISMOLOGICAL INFORMATION

Occurrence time	1:04 a.m. (local time)	28 May 1995
	1:04 p.m. (GMT)	27 May 1995
Magnitude	7.1 – 7.6 (Richter scale)	
Epicenter	52,8` N 143` E	
Focal depth	33 km	

IMPACT AND DAMAGE

Sakhalin

Territory affected	> 15,000 km^2
Population affected	> 55,000 persons

Neftegorsk

Casualties		Damaged facilities	
Instantly killed	1,989	Buildings*	26
Missing	350	Totally destroyed	17
Injured	375	Severely destroyed	0
		Partially destroyed	9
		Buildings	9

* Municipal buildings alone. More than 1,500 private houses are not included

IMPACT AND DAMAGE TO LIFE-LINE UTILITIES

Suspension of water supply	All houses in Neftegorsk for 24 hours
Impact on electrical grid lines	200 km
Impact on communications (telephone)	300 km
Impact on oil pipelines	45 km
Impact on gas pipelines	1 km
Suspension of oil and gas terminals	3
Direct economic losses	US$ 100,000,000
Indirect economic losses	US$ 300,000,000

MEANS AND FORCES INVOLVED IN SEARCH AND RESCUE OPERATIONS IN NEFTEGORSK (MAY 28- JUNE 10, 1995)

Increase within 24 hours (May 28–29, 1995)

Rescue personnel (persons)	> 4 times
Equipment (pieces)	> 2 times

SAR capacity since May 30, 1995

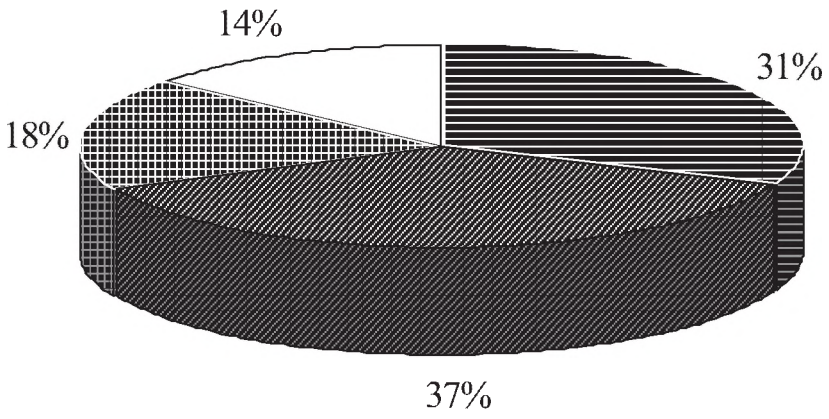
Rescue personnel	1,600
Policemen	73 (incl. 24 in Neftegorsk)
Equipment	190
Airplanes	20
Helicopters	15

PROFESSIONALS INVOLVED IN RESPONSE ACTIVITIES
(personnel per 10,000 population affected*)

	Sakhalin (Russia)	Hyogo and Osaka Prefectures (Japan)
SAR personnel	291	31
Doctors and nurses	19	9
Policemen	13	28

- Population affected in Sakhalin exceeded 55,000 and those in the Hyogo and Osaka prefectures 9,390,000.

SAR PERSONNEL COMPOSITION



RESPONSE ACTIVITIES

SAR operations

Number of bodies salvaged	2,634
Number of victims saved	406

Medical and health care support

Number of treated persons (including children)	510
Of which were children	180

Evacuation and hospitalization

Number evacuated and hospitalized	203

Fire fighting activities

Number of fires extinguished	13

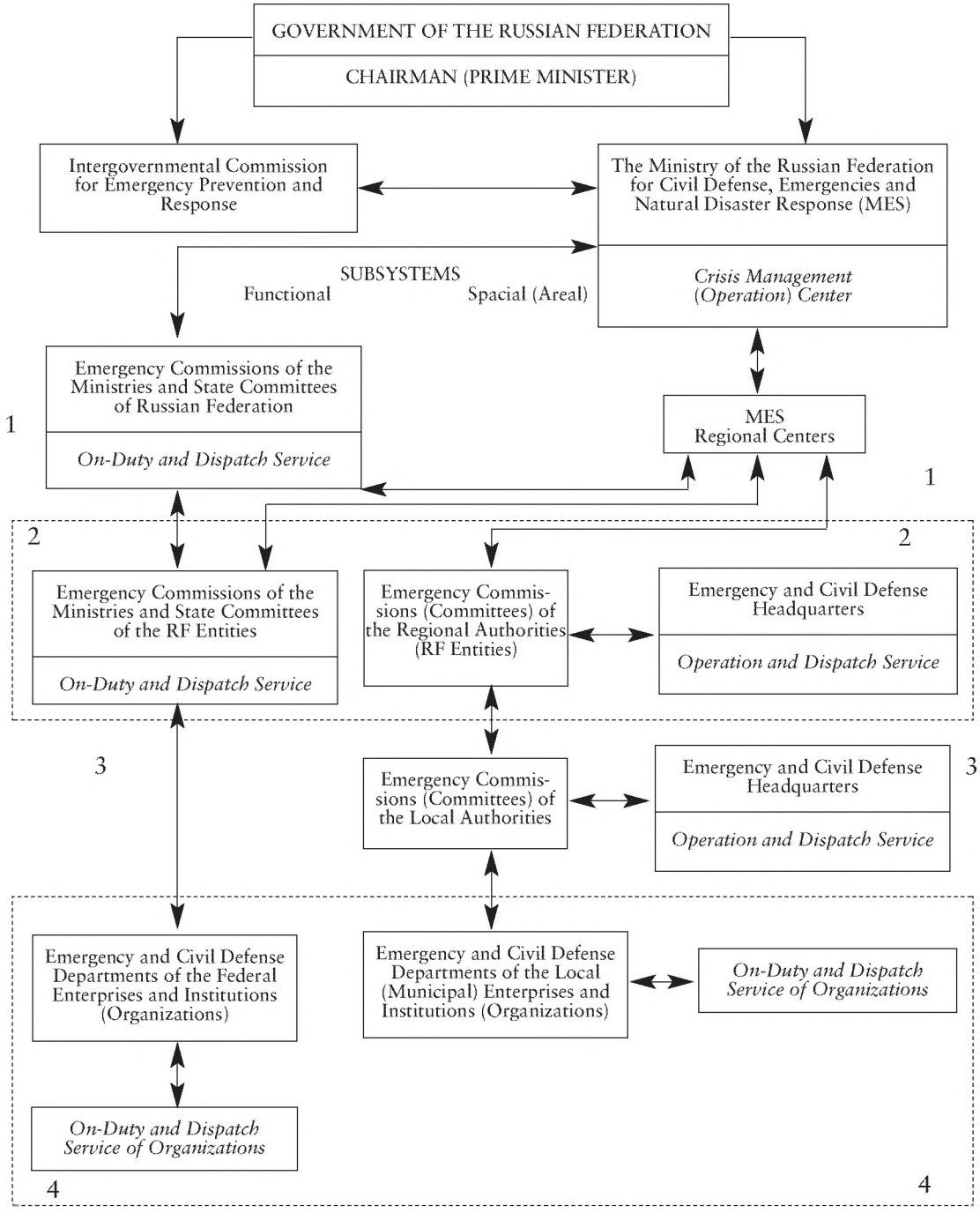
Counter-looting operations

Number of cases stopped	7

Appendix 2
Types of Crises

Crisis type	Examples	Characteristics of the continuity and severity of crisis impact
Acute and disturbing crises	Accident or emergency	Occasions, which involve a temporary break of normal social routines, substantial economic costs (or losses) and casualties within a community. Normal routines can be restored to a considerable extent within a relatively short period of time.
Chronic and exhaustive crises	Disaster	Occasions, which involve a long-term break or substantial rupture in social communications and the social structures of a community: • can imply deaths and/or severe health and/or environmental deterioration, and • huge material damages which could be restored (rehabilitated, compensated) to a certain degree only within the medium or long-term perspective.
Devastating crises	Catastrophic disaster or a catastrophe	Occasions, which involve a long-term break or rupture in social communications and the social structures of a given community: • can imply numerous deaths, massive health and/or environmental deterioration. • a huge amount of stress to the affected people and the neighboring communities. • can involve enormous and practically irreversible (uncompensated) social, environmental and material damages which may only be resolved or restored in the distant future.

Appendix 3
Organizational Structure of the USEPE



RUSPRE Management Levels

1 – federal and macroregional
2 – regional
3 – local
4 – organizational

RUSPRE Management Agents

Emergency Commissions (Committees) of the Regional Authorities (RF Entities) – Coordination and management agents

Commands and information flows

Operation and Dispatch Service – Everyday operation agents

Chapter 5
Social Welfare and Benefits for the Chernobyl Liquidators

Elena Shlikova

CM Europe[23] Program Methodology and Design

The CM Europe Program is compiled of case studies based on a "structured and focused comparison" methodology (George, 1979). This approach enables the integration of findings from several studies by focusing on specific elements or aspects in each individual case. The concept of crisis decision making is one significant element within the framework of the CM Europe Program and this concept is considered in this case study.

The subject of this study concerns the management of the recovery process for those affected by the Chernobyl nuclear disaster from its onset to the present. The evolution of the state's policy concerning the rehabilitation of the Chernobyl rescue workers (*liquidators[24]*) and the institutional context of providing social aid to these individuals are contemplated in this study. Particular attention is paid to analyzing the various management tools and procedures employed by the government agencies for providing the liquidators with social security (economic security and social welfare) and social benefits (preferential treatment and privileges in return for their service to the nation). Additionally, the effectiveness of these management tools and procedures in increasing the quality of life for the Chernobyl rescue workers is examined. The state's social security policy for the people affected by the Chernobyl accident is compared to the policies and methods promoted by the Chernobyl rescue workers' own organization. This task is done to a large extent

[23] The CM Europe Program was originally established in 1997 as the CM Baltic Program. The CM Baltic Program focused its research on the Baltic Sea region. In July 2000, the research program expanded to include Europe as a whole and thus evolved into the CM Europe Program.

[24] *Liquidator* is the term used to describe the use of professional and amateur rescue workers (including medical personnel, police officers, etc.).

by scrutinizing the changes in the Russian Federation Law on Social Security Measures for Those Affected by Chernobyl (hereafter Chernobyl Social Security Act) and in other relevant legislation, and by exploring the Chernobyl rescue workers' attitudes to these changes.

Crisis Definition

Many scientifically grounded definitions of a crisis exist. For example, the US sociologist R. Park (the forefather of social ecology) asserted that when societal crises become recurring phenomena, they test a system's critical breaking point in terms of the system's own development and the system's relations with its environment (cf. Barazgova, 1977: 70).

Within the framework of the social order conflict theory (which implies that a conflict is a specific organizational form of breaking social order), a crisis is regarded as an agent or factor contributing to a conflict's acceleration. One key characteristic of a crisis, according to this perspective, is an individual's inadequate comprehension of his/her place in the social structure. This creates a gap between the individual's desired and real position in any given situation (Roy, 1994: 36).

CRiSMART scholars regard a crisis as a situation which entails a serious threat to basic values and norms with a great deal of uncertainty and considerable time constraints. A crisis often involves an increasing number of unfavorable events which call for immediate action and wise decisions (Svedin, 1999: 1). While this study considers the definitions and methods used by the CRiSMART research group in Sweden, the discussion of the Chernobyl crisis will primarily be guided by the crisis definition developed by the team from the Institute of Sociology of the Russian Academy of Sciences. This understanding of a crisis focuses on the concept of a crisis as a breach in the social order which threatens the norms and values of the social being and social cohesion. This disorder usually stems from a lack of tools or means for effective crisis management and for maintaining social control. Such crises may occur at the international, national and/or local (community, social, demographic, professional, etc.) levels.

The Subject of the Study and the Methods Used

This case study focuses on the management of the social security policy for Chernobyl liquidators starting from the time of the accident up to the present. The research methods used in this study are similar to those extensively used within crisis management research. In particular, the development and implementation of normative state laws and acts (which regulate the social security policy for the Chernobyl liquidators and its institutional context) are considered. The various management tools used to provide social security to the liquidators and the liquidators' attitudes to these policies are also analyzed.

Sources

The sources used in this study include normative documents, the government's investigation of the accident, the recovery program, expert information, newspaper articles, professional journals, workshop and conference presentations, and the findings from the liquidator survey.

Background

THE CRISIS EVENT AND ITS CONSEQUENCES

The Chernobyl Nuclear Power Plant (ChNPP) is situated in the eastern part of a vast region called the Belorussian and Ukrainian Polessye. The nuclear power plant is located on the bank of the Pripyat River which drains into the Dnieper River 18 km from the regional center of Chernobyl.

The accident at ChNPP occurred at 1:23 a.m. (Moscow time) on April 26, 1986, when the fourth power unit of the plant exploded during a test. The power unit capability was being tested while the electricity supply was switched off, yet the generator's turbine was still rotating inertially. During this test, the electricity supply to the safety system was also turned off in order to ensure an accurate testing. However, this meant that the reactor was uncontrollable thus creating conditions for a major crisis. The explosion tore the reactor's vessel and severely damaged the reactor building. The explo-

sion was followed by a fire and radioactive material was discharged into the air.

The Chernobyl disaster was the worst of its kind in the entire history of nuclear power industry in terms of its impact on human life, the economy and the environment. From an environmental perspective, Chernobyl was considered a global disaster. Russian experts estimated in 1990 that economic damages would soar up to as much as US$ 180,000–250,000 million by the year 2000 (Arskiy, 1991).

Nearly 30 regions in the former Soviet Union, with more than 4 million people, were directly affected by the radioactive fallout. The fallout was also registered as far as 2000 km away from the accident site; it spread to at least 20 other countries. Thousands of people died or became seriously ill, and many others have had their health considerably compromised. The health effects include among other things: radiation sickness, cancer in children, chromosome abnormalities, malignant neoplasm and heart attacks. The population living within the 30 km radius of ChNPP experienced severe trauma with numbers reaching 116,000 in April and May 1986 (Porfiriev, 1996). In addition, considerable damage was inflicted upon the natural environment with thousands of hectares of forest and arable land spoiled by radiation. This considerably disturbed the reproductive functions, blood composition and bone marrow of the mammals living in the area. Furthermore, the accident significantly altered the fauna and soil composition, as well as fish and mussel reproduction.

The Liquidators: The Acute Crisis Response Teams

Given the severity of the accident, attempts to alleviate the consequences took several years and involved a number of stages. In general the crisis response was focused on two principal stages: 1. the explosion of the reactor and the fire thereafter, and 2. the radioactive fallout and the long term consequences. The rescue workers' main tasks after the explosion were to prevent the fires from spreading to the neighboring ChNPP power units, to provide urgent medical care to those exposed, and to evacuate the residents in the surrounding communities. After the radioactive fallout, a few of the main crisis management aims were to locate and deactivate the radi-

ation in the affected area, to provide medical aid to the displaced residents, and to maintain public order in the disaster area and the neighboring communities.

The rescue workers took an active part in all kinds of activities during both of the disaster alleviation stages. The response was officially described as the "liquidation of the accident's consequences." For this reason the rescue workers, medical staff, police, military personnel, various other professionals, and volunteers involved in the urgent response field were called "liquidatori" in Russian ("liquidators" in English).

The firefighters and the ChNPP personnel were the first to be exposed to the radiation, and thus were exposed to the highest levels of radioactivity. In the initial stage of emergency response, ordinary military units (composed mainly of enlisted soldiers between the ages of 18 and 20) were involved in the rescue work. They were then subsequently replaced by the older servicemen (over 30 years old) from the army reserve units.

The burden of the first urgent response measures fell upon the chemical units who measured the radiation levels and who inspected and deactivated the chemicals in the contaminated area. In addition, the military aviation units 'bombed' the damaged reactor with anti-heat materials from above with helicopters. Soldiers and volunteers conducted the dangerous and difficult task of cleaning off the radioactive debris from the roof and the machine hall of the damaged reactor building. The military engineering corps and the construction corps also assisted. They put concrete under the reactor's foundation in order to reinforce it and to prevent radiation from leaking into the groundwater.

In addition to the military units, the liquidators included civilian professions: miners, construction workers, and electricians. The miners assisted with the work underground. The miners' most labor intensive and dangerous task was cutting out a corridor under the destroyed facility so that a refrigerating 'pillow' could be constructed in order to cool the area under the damaged reactor. To prevent the radioactivity from penetrating the groundwater and surface water, the construction workers erected protective dams and barriers. A steel and concrete container was built over the damaged reactor. In difficult and hazardous conditions, the electricians set up lighting in order to facilitate the rescue and alleviation work in the

least accessible places and to enable work throughout the night. The outstanding contribution of the physicians (military and civilian), the police, scientists (physicists, chemists, biologists), drivers, cooks and many others can not be overestimated. Some of these liquidators worked several shifts in Chernobyl. In brief, the Chernobyl rescue and alleviation operations were conducted under harsh and high risk conditions. More than 600,000 liquidators from almost every Soviet republic assisted in the operations.

The Russian State Medical and Dose Register is an inventory of information on the 174,916 liquidators and 21,771 children (born after the accident). This inventory was presented on January 1, 1999 (Federalnaia Tselevaia Programma, 1999). Most of the liquidators came from the North Caucasian region (more than 23,000), the Central European region (almost 22,000), the Urals (19,000) and Volga River region (17,000). The social, economic and psychological problems experienced by the Chernobyl rescue workers are similar, to a great extent, to those experienced by war veterans and by victims of war, atomic bombing and natural disasters.

However, the problems of the Chernobyl rescue workers are in many ways unique. First of all, the liquidators were not professionally trained rescue workers. Secondly, many of them had been dispatched to the area with little or no knowledge about the nature of the mission. In addition, the Chernobyl rescue workers conducted the rescue operation within the existing framework of the totalitarian state government, which had declared itself democratic, but had not yet implemented democratic practices. The failure to solve a number of critical issues during the Chernobyl crisis should be attributed to the transitional character of the socio-economic policy and institutional structure of the system which existed at that point in time.

The Russian Mass Media Coverage of Chernobyl

The first public statement from the USSR Council of Ministers about the accident at the ChNPP was brief and published in the Soviet newspapers on the third day after the explosion on April 28, 1986. On May 7, 1986, Pravda (a daily Moscow newspaper) published an account of the press conference held by the members of the Government Commission for the Liquidation of the Accident at

the Chernobyl Nuclear Power Plant. On May 14, Mikhail Gorbachev (the then General Secretary of the Central Committee of the Communist Party of the USSR [CC CPSU]) appeared on Soviet TV. He said a few words about the accident but neither he nor the press gave a true picture of the magnitude and severity of the disaster.

The CC CPSU immediately organized a special task force after the accident. Premier Nikolai Ryzhkov chaired the task force. The mass media was not given access to information discussed by the task force until May 26, 1986. At that point, the chief editors of the federal newspapers were instructed "to concentrate the public's attention on the measures being taken by the CC CPSU and the Government to ensure normal everyday working and social conditions and on the measures to liquidate the accident. And there should be a lot of media coverage on the work being done to implement these measures" (Yaroshinskaya, 1992: 245). At the special task force meetings, all of the newspaper articles and radio and TV broadcasts were reviewed. The 'positive' publications were approved and given a specific publication date whereas the 'negative' ones were completely rejected.

Immediately after the accident and in the years to come, various departments issued instructions about concealing or completely withholding information from the public concerning the causes and severity of the accident. For example, Yaroshinskaya (1992) points out the instructions given by the Third Chief Department of the USSR Ministry of Health in "Enhancing the Regime of Secrecy Concerning the Liquidation of the Accident at the Chernobyl Nuclear Power Plant" dated July 27, 1986. This approved classifying information on the accident, the degree of radiation contamination, and the effectiveness of the medical treatment for those exposed. She also cites "Information on Issues Pertaining to the Accident at the Chernobyl Nuclear Power Plant Prohibited for Open Publication in the Press and Prohibited for Radio/Television Broadcasting" dated September 24, 1987. This stipulated classifying information on the radiation contamination levels which had exceeded the legal limits. It also prohibited making public data on the deteriorating physical well-being of and working conditions for those engaged in the liquidation process (Yaroshinskaya, 1992: 55).

In early 1989 the USSR Minister of Power Industry and Electrical Energy (Minenergo), Mr. Mayorets, issued an order which re-

stricted information to the public concerning accidents and fires at the country's industrial engineering plants and construction sites, equipment failures, data on material and environmental damage, and human casualties. This information was covered up "to ensure control precluding the unauthorized disclosure of the above information in internal documents, telegraph correspondence, and materials intended for publication in the open press" (Yaroshinskaya, 1992: 58).

These and other instructions were implemented and the media was significantly limited. This restricted the general public's access to trustworthy information about Chernobyl until the late 1980s. Some of the data regarding public health and the environmental effects of the radioactive fallout in the regions affected by the Chernobyl accident were opened to the public three years after the accident when the Order of the USSR Government (May 24, 1989) was issued. An analysis of the federal, regional and local newspapers and journals published between 1989 and 1991 reveals that the majority of information concerning the severity of the disaster and the liquidators' health was covered up.

During these two years (1989–1991), the press publications focused primarily on the problems of relocating the residents from the contaminated areas. These articles also mentioned the rate of illness and the organization of medical and social aid. The journalists of these articles were quite critical to the authorities' efforts to alleviate the disaster. Likewise, discussions arose concerning the hazards associated with radiation exposure, and the alternative methods of assessing and monitoring radiation. In addition, information about the distribution of federal and international relief aid for Chernobyl was compared to that allocated for similar accidents.

Some interesting information about the liquidators was published in the professional weekly newsletter *Rossiiskii Chernobyl.* Unfortunately this newsletter has a very limited circulation of just 6,000 and is solely distributed to the regional branches of the NGO "Souyz Chernobyl" [Chernobyl Union]. For this reason (and because of irregular publishing as a result of financial problems), this newsletter was not available for analysis in this case study.

The Key Crisis Actors

The bulk of crisis and disaster experts have asserted that the Soviet response units and services were poorly prepared to deal with the Chernobyl disaster. Prior to the explosion, specialists considered that the possibility of a major accident occurring at one of the Soviet nuclear power plants was close to zero. Likewise, it was presumed that there was a very low probability of a large radioactive discharge occurring. However, reality proved to be much different than those assessments. The actual radioactive fallout from the damaged reactor in Chernobyl lasted for at least 10 days.

Despite the fact that many nuclear and radiology experts in the former Soviet Union considered the country's safety measures at the various nuclear facilities to be satisfactory and the civil defense plans for community protection to be adequate, the Chernobyl accident revealed that there were serious flaws in the system. For instance, at the time of the Chernobyl disaster, no system or service existed for properly training professional rescue workers for a radioactive disaster. Previous accidents in the nuclear industry (i.e. at the Mayak facility in the Chelyabinsk region and at the Semipalatinsk nuclear testing grounds) were simply covered up and swept under the rug.

Most of the liquidators, who were employed to help during the Chernobyl accident, were lay people with little or no training in radiation safety so they lacked the necessary skills to deal with such matters. After the accident, these people were removed from their everyday social environment (work, family, friends, etc.) and relocated to a totally different domain (often against their will and against the wishes of their families) with strict rules and discipline under extremely dangerous conditions. These people sacrificed their health and the health of their future children in an attempt to minimize the consequences of the radioactive accident.

According to the Ministry of Health sources, the number of healthy liquidators dropped between 1986 and 1990 from 78% to 56% (Porfiriev, 1996: 16). Today more than 50,000 liquidators (average age 38–40 years) are invalids and almost 15,000 have died (Grishin, 1999). Likewise, medical and psychological tests have revealed substantial changes in the psychological well-being of many liquidators after their experiences at Chernobyl (see Bobneva, 1992; Kirilenko, 1992).

The Chernobyl accident and its aftermath was a complex and multi-stage crisis. First and foremost, the liquidators' basic values (including life itself) were directly threatened. They were taken away from their everyday life and put into a high risk situation which the non-professional rescue workers were not properly trained to deal with. Experts call this the "Chernobyl victim complex" or "the lost sense of life" which manifested itself among the liquidators and the victims who suffered psychologically. They were "looking for someone to blame for their inferior social status" (Arskiy, 1991: 10). These factors comply with the notion of crisis as an event which breaks social norms and standards.

Despite the efforts undertaken by the federal government to cope with the major crisis, the situation was further exacerbated by poor legislation and an inadequate social security policy. When the accident occurred, legislation was lacking which mandated the state's responsibility to the country's citizens. Social security mechanisms for victims of radiation were also lacking. There were missed opportunities for implementing measures to restore organizational order. Considering the number of people affected by the liquidation attempts, this was clearly a national crisis.

In 1991 the crisis entered the second phase and had at that point evolved into a "creeping crisis." Also that same year the Chernobyl Social Security Act was enacted. It set up a number of privileges and compensation for the liquidators. However, no mechanisms for implementation accompanied the act. The liquidators continuously received written guarantees promising social protection from the government, although concrete privileges and compensation were not issued because there were no formal procedures for implementing them. The second 'creeping' stage of the Chernobyl crisis is explored further in this chapter. The key *crisis source* was the federal government and the *crisis victims* were the Chernobyl liquidators who were striving for legal, social and psychological aid from the government authorities.

Chronology

THE DEVELOPMENT OF THE STATE SOCIAL SECURITY POLICY FOR THE LIQUIDATORS: 1986–2000

In this section the main decision-making issues concerning the alleviation of the Chernobyl disaster and the social security policy for the liquidators are presented.

The Beginning: 1986–1989

Large-scale activities for dealing with the disaster were initiated by the federal ministries, federal departments, and national services immediately after the accident on April 26, 1986. The crisis management centered on reducing the radiation risk, removing the radioactive debris, and relocating the area residents. There were also some normative acts providing certain privileges and compensation to the liquidators. These are considered in more detail later in this chapter.

According to a number of government documents (Sbornik, 1993: 19–20, 50–52, 59–60), the Chernobyl rescue workers were entitled to extra payment, a daily allowance and free meals while working in Chernobyl. The same right was provided to the servicemen directly engaged in the rescue and recovery work in the evacuated areas. In addition, the rescue workers and servicemen received special vouchers for free visits to various clinics and health resorts the first year after working in Chernobyl. In the event of occupational disease, the above mentioned acts provided the liquidators with the right to early retirement and/or a privileged pension. The emphasis was on privileges rather than compensation for the health problems experienced by the liquidators. Health problems caused by radiation do not appear right away. There is usually a delay in the impact it has on human health and the environment. Thus, the liquidators' state of health will increasingly deteriorate in the future.

The Order of the USSR Council of Ministers from December 11, 1986 (No 2488p) addressed the issue of people with radiation sickness as a result of the Chernobyl accident (Sbornik, 1993: 63). These people were given free medicine and free visits to various clinics and health resorts (including reimbursement of travel costs to and from such facilities). The State Labor Committee and the USSR Ministry of Health were ordered to organize special medical and la-

bor commissions to examine those who got ill and were diagnosed with occupational diseases as a result of the Chernobyl accident.

Another order was issued in 1990 (Sbornik, 1993: 78–80) which gave every eligible liquidator the right to a privileged pension. This implied equal rights for all of the liquidators and for those working in the evacuation zone, since the health risks for these people was apparently much higher. Therefore, distinguishing the liquidators from the other victims, and determining their legal and social status became increasingly important for the crisis decision-makers.

Every law and regulation passed between 1986 and 1989 in one way or another contained decisions regarding financial and social aid for the Chernobyl liquidators. Yet the issue of social security for those affected by radiation was not taken up by the federal government nor the Parliament until 1989. It was considered for the first time in the construction of the State Program for the Liquidation of the ChNPP Accident (from 1990 up to 2000) and in the accompanying documents.

In March 1990 the former Soviet Parliament (Sbornik, 1993: 155–157) in a decree established the legal status of the liquidators. This meant that everybody engaged in rescue work within a 30 km radius of the accident was certified as a "Chernobyl liquidator" and thus entitled to certain rights and privileges. The same decree also distinguished the liquidators from the other radiation victims. The rescue workers were subdivided into two categories: those working in the disaster zone between 1986–1987 and those between 1988–1989. This time specification was used to differentiate the set of privileges provided to the liquidators since the radiation risk to human health was much higher immediately after the accident. Lastly, the decree promoted the development of an integrated state register for all of the liquidators.

The Governmental Programs

In November 1989 the USSR Supreme Soviet gave the federal government and the State Committee for Ecology and the Rational Use of Natural Resources the task of preparing an unified program for the alleviation of the Chernobyl disaster. The governments of the former Soviet Union republics in Russia, Belorussia and Ukraine developed two kinds of state programs: urgent measures for dealing

with the liquidation of the accident (1990–1992), and long-term measures (1990–1995 and thereafter).

The state program for urgent measures was approved by the USSR Council of Ministers on April 21, 1990. The program consisted of four parts: one for the federal union and three for each of the affected republics (Russia, Belorussia and Ukraine). The federal union part focused on the scientific and technical aspects of the urgent recovery measures including deterring radionuclides, protecting the groundwater, providing radiation safety and so forth. A special section of the program considered measures for protecting the health of the residents living in the radioactive areas and the health of the liquidators. In order to coordinate the implementation of this, the Joint Coordination Council of the Russian, Belorussian and Ukrainian Academies of Sciences was organized.

A program for the long-term recovery policy was drafted. This draft was seriously scrutinized by the State Expert Commission which consisted of nearly 90 specialists and was headed by three national experts (one being Prof. Boris Porfiriev who is a co-editor of this volume). These specialists came from the USSR Academy of Sciences, the USSR State Construction Committee, the USSR State Committee on Science and Technology, the USSR State Committee for Hydrometeorology, and the NGO "Chernobyl Union."

The commission pointed out that a number of serious loopholes existed in the draft program, in particular the state policy concerning the recovery work in Chernobyl. The state policy tended to down play the public's interests and concerns regarding the accident's long-term consequences, and tried to shift responsibility away from the state and the government institutions. This disregarded the anxiety and frustration experienced by the victims for themselves and the well-being of their children. These programs failed to address social protection and social security issues, although there were hundreds of thousand of rescue workers suffering from high radiation exposure. The programs also lacked implementation and control mechanisms, crisis management tools, and legal support (Arskiy, 1991: 17–21).

State programs on the issue of long-term recovery from the Chernobyl disaster were submitted for consideration to the USSR Supreme Soviet on April 25, 1990. During the hearings, the members of the USSR Supreme Soviet stressed the necessity to include a

special section on social protection and social security for the liquidators. Here are a few excerpts from some of the speeches made by the USSR Supreme Soviet members at the joint session hearings on April 25, 1990.

> ***K Salikov*** – Chairman of the USSR Supreme Soviet Committee on Ecology and the Rational Use of Natural Resources:
> "Economic issues are discussed too much to the extent that it is detriment to the human spirit and morale. One could argue that the role of social and psychological aspects has been underestimated... Liquidators, in particular, should be considered and deserve special attention. Together they amount to over 600,000 people. How can our country ever repay its debt to all of them?" (Verkhovnii Soviet SSSR, 1990: 17).
>
> ***S. Gurenko*** – The Second Secretary of the Ukrainian Communist Party Central Committee:
> "The existing privileges [to the liquidators] are scattered in various governmental and departmental documents and their circulation is restricted because they are considered "confidential." Those affected are not aware that such documents exist and many local officials do not either. Due to the loopholes in the existing [legal] norms, fair compensation to such people for the loss of health and economic damages are not often awarded" (Verkhovnii Soviet SSSR, 1990: 39–40).
>
> ***N. Feskov*** – A member of the USSR Supreme Soviet:
> "The children of the liquidators deserve the same attention as those living in the contaminated areas" (Verkhovnii Soviet SSSR, 1990: 48).

In spite of the aforementioned serious shortcomings the All-Union and Republican Program on the Liquidation of the Chernobyl NPP Accident (adopted by the USSR Supreme Soviet on April 25, 1990) ignored most of the proposals which were critical. In addition, the Decree of the USSR Council of Ministers (No 645) issued the "Implementation of the USSR Supreme Soviet Decree on the Unified Program for the Liquidation of the Chernobyl NPP Accident" as

late as on June 30, 1990 (Sbornik, 1993: 158–159). This document described the mechanisms for implementing the program.

"The Unified State Program on the Protection of the Russian Federation Population Against the Impact of the Chernobyl Disaster for the Period up until the Year 2000" and "Urgent Protective Measures Against the Impact of the Chernobyl Disaster for the Russian Federation Population, 1996–1997" were adopted. Later these two were amended by "The Federal Targeted Program on the Protection of the Russian Federation Population Against the Chernobyl Disaster Impact up until the Year 2000." Despite all of the shortcomings and loopholes, it is evident that since 1990 Russia has seriously considered the issue of recovering from the Chernobyl disaster and has attempted to address this with various programs.

On February 20, 1991, the third session of the Russian Supreme Soviet held hearings on the Russian Federation program "Children of Chernobyl"; a program introduced by the Committee on Women, Family, and Child Protection of the Supreme Soviet of the USSR. The program was designed by the Institute of Pediatrics, the Institute of Child Surgery (under the Russian Ministry of Health), and the Committee on Family and Demographic Policy Affairs (under the Russian Council of Ministers). The program aimed to provide medical and social aid to the women and children living in the contaminated areas, since a number of genetic defects have been linked to radiation exposure (including those indirectly exposed via their parents). Nevertheless, the program failed to consider the issues of the liquidators' children, those born after April 26, 1996 (Verkhovnii Soviet RSFSR, 1991). The program was endorsed and then set for implementation between 1991 and 1995 by the decree of Russian Supreme Soviet (No 1113–1) dated April 27, 1991 (Sbornik, 1993: 273–274).

Numerous decrees and guidelines from the different state bodies were issued between April 1986 and 1991 and focused on the specific problems related to alleviating the consequences of the accident, but they often lacked the concept of a social security policy. Thus these documents were often quite ambiguous, and distortions and abuses were clearly evident at the local and regional levels. Vast material and financial resources were ineffectively used. This problem was partly alleviated after the Chernobyl Social Security Act was passed in 1991.

The 1991 Chernobyl Social Security Act

On May 12, 1991, the USSR Supreme Soviet approved the decree on enforcing the USSR Chernobyl Social Security Act (Sbornik, 1993: 242). The draft was developed by the USSR government with active participation from the Council of Ministers of Ukraine, Belorussia and Russia along with various committees and commissions from the Supreme Soviets (in particular, the Committee on the Liquidation of the ChNPP Accident, the Public Health Protection Committee, and the Ecology Issues Committee).

The 1991 Social Security Act focused on defending the rights and interests of the citizens exposed to radiation as a result of the accident at ChNPP. It established legal perimeters for the radiation victims and for the contaminated areas. Likewise, privileges and compensation were stipulated for every category. Medical standards and radiation protection for the affected communities and liquidators were also established. The act specified measures for social security, medical and health care, state insurance rules, and pension guarantees for all liquidators.

The Supreme Soviet, the local Soviet Deputies, the trade unions and the various organizations for the Chernobyl victims supervised the implementation of the act. Sections concerning social security for the liquidators and their families are mentioned in: Paragraph 13 "Categories of citizens exposed to radiation from the Chernobyl catastrophe," Paragraph 14 "Compensation and privileges to the citizens with radiation sickness and other health-related problems as a result of the Chernobyl catastrophe," and Paragraph 15 "Compensation and privileges to the liquidators of the Chernobyl NPP catastrophe."

Other paragraphs worth mentioning include Paragraph 24 "Organization of medical care and radiation protection for the people affected by the catastrophe at Chernobyl NPP" and Paragraph 25 "Social security, medical and health care for children." Paragraph 29 "Pensions for citizens who have become invalid as a result of the Chernobyl catastrophe and for people who lost family members as a result of the Chernobyl catastrophe" and Paragraph 30 "Pensions for the liquidators of the Chernobyl NPP catastrophe" should also be mentioned as well.

One should not overlook Paragraph 39 "Compensation for health problems (radiation sickness, invalidism or other disorders)

obtained as a result of the Chernobyl catastrophe, and compensation to people who lost family members as a result of the Chernobyl catastrophe." This one is supplemented by Paragraph 40 "Compensation to liquidators who have experienced health problems as a result of the Chernobyl NPP catastrophe." Lastly, there are Paragraph 41 "Compensation for the loss of a family wage earner involved in the liquidation of the Chernobyl NPP catastrophe" and Paragraph 42 "Compensation for health problems as a result of the Chernobyl catastrophe and for the loss of a family wage earner."

Significant changes and amendments have been introduced since the act was signed in 1991. For instance, the sections on social security for the liquidators were amended on June 18, 1992, in order to include free medical insurance for the liquidators. The federal budget had to fill the gap between the expenses for implementing this special program and those for the basic obligatory medical insurance. In addition, social security and medical and health care for the liquidators' children were included in Paragraph 25.

Amendments Made to the 1991 Chernobyl Social Security Act After 1995

The increasing number of amendments to the original 1991 Chernobyl Social Security Act led to its replacement in November 1995, when a new act with a very similar title was introduced. Worth particular mentioning is Paragraph 15. The respective section in the earlier mentioned 1991 act specified the allocation of interest-free loans for the construction of housing (equivalent to 600 minimal wages), but in the 1995 Act this paragraph allocated just a lump sum for interest-free loans to be used to buy apartments. These loans could only be obtained on the unique condition that a liquidator was officially recognized as "in need of housing." However, the formal procedures for this are missing thus it is unclear what should be regarded as a basis for such compensation and for what amount. Thus the local administrators responsible for enforcing this and other issues of the act have been put into a difficult situation.

On December 11, 1996, the act was further amended with a paragraph, which encompassed people affected by other radiation accidents so they too could be eligible for privileges and compensation. These people included those exposed to the nuclear tests in the

Semipalatinsk region in the 1950s and 1960s, the radiation accidents at the Mayak facility in the Chelyabinsk region in 1957 and 1961, and the servicemen of the so-called special units exposed to high risks.

Despite these changes, the legislation still lacks the necessary mechanisms for implementing such privileges and for issuing compensation to the liquidators. The existing Russian legislation also ignores the fact that the federal government used conscription to mobilize rescue workers. The high-level authorities simply shifted their responsibility for the liquidators' and their families' social security to the lower decision-making levels. The existing legislation also lacks guidelines for addressing the potential and actual health problems experienced by the liquidators and their children born after the accident. Thus, clauses in the current law on Chernobyl concerning social protection and social security for the liquidators need to be improved.

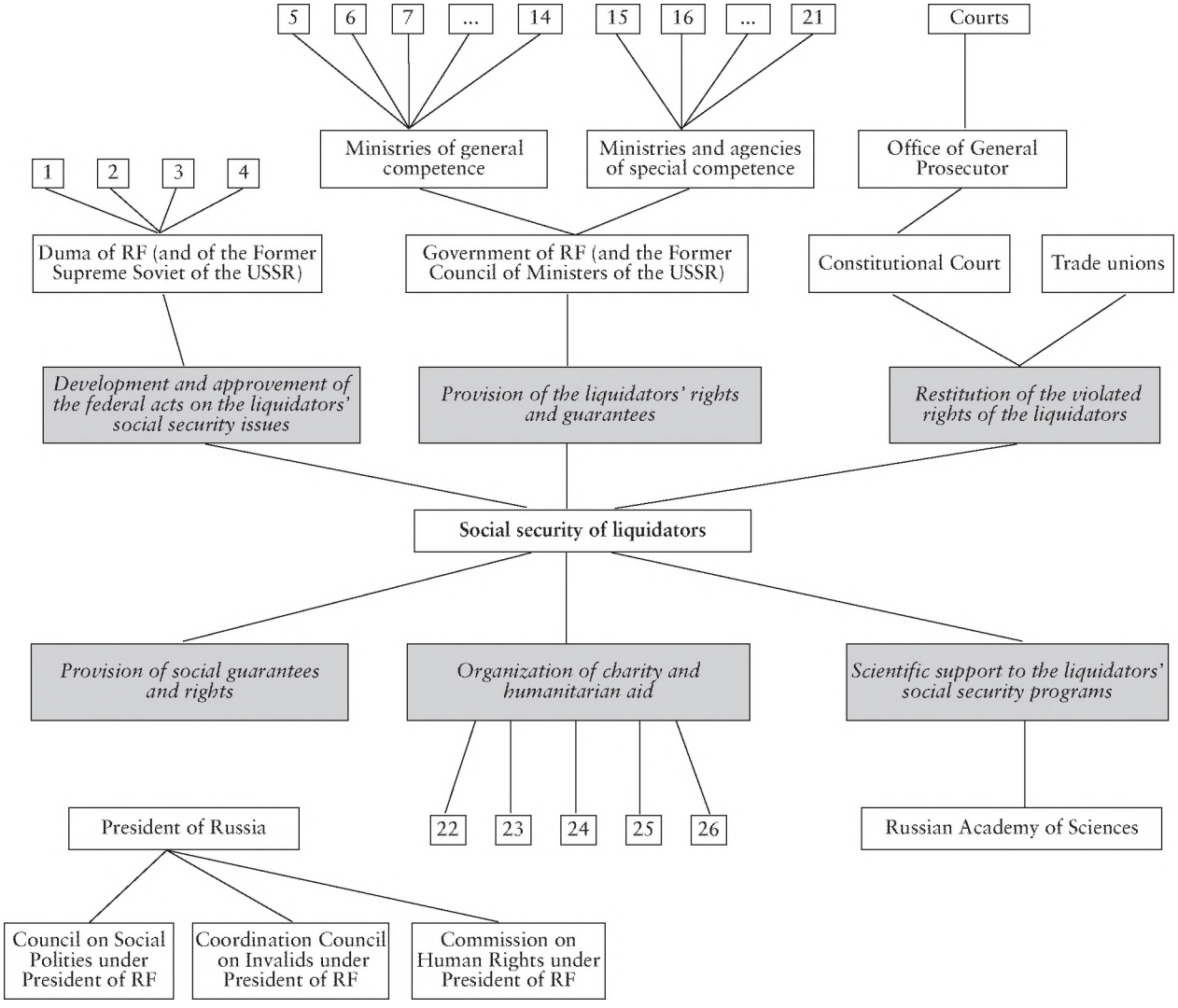
Governmental Recovery Program for 2001–2005

The Order of the Russian Federation Government from April 29, 1999 (No GL-P1 – 14233) was used as a foundation for developing the Federal Targeted Program on the Protection of the Russian Federation Population for Minimizing the Impact of the Chernobyl Disaster between 2001 and 2005. It focused on reducing the adverse physical, social and psychological impact of the disaster agents on the communities and liquidators, and on economically rehabilitating the radioactively contaminated areas. The aim of the program is to reduce the risk of remote radiation-induced pathologies, to improve the quality and availability of medical and psychological aid, and to raise the living conditions for those people affected by the Chernobyl accident (Federalnaia Tselevaia Programma, 1999).

The program was designed by EMERCOM (who also serves as the program coordinator), the Russian Federation Ministry of Health Care, the Russian State Committee for Environmental Protection, the Russian Federal Service for Hydrometeorology and Environmental Monitoring, the Russian Federal Forest Service, and the regional administrations in Briansk, Kaluga, Orel and Tula. The implementation of this program is the responsibility of the executive branches of the aforementioned federal bodies and regional authori-

ties. This means that the same departments and often the same people are in charge of developing, making and implementing the decisions regarding the program.

The social security system for the liquidators within the institutional framework is presented in the following diagram.



The Legend to Figure 1

– Management functions

– Management agents

1. Committee for Labor and Social Policy
2. Committee for Ecology and Natural Resources
3. Committee for Health Care
4. Committee for Women, Family and Youth Issues
5. Ministry of Health Care
6. EMERCOM
7. Ministry for Nuclear Energy
8. Ministry of Defense
9. State Federal Committee for Property and Ownership
10. State Federal Sanitary and Epidemiological Supervision
11. Ministry for Natural Resources
12. Ministry of Finance
13. State Federal Customs Committee
14. State Insurance Company (GOSSTRAKH)
15. Ministry of Social Security
16. Ministry of Labor
17. Federal Employment Service
18. Pension Foundation
19. Social Insurance Foundation
20. Medical Insurance Foundation
21. Public Social Security Foundation
22. Red Cross Society
23. All-Russian Society for Invalids
24. Charity and Health Foundation
25. Russian Children Foundation
26. Church

Quality of Life for the Liquidators: The Effectiveness of the Social Security Policy

The social security policy for the Chernobyl liquidators is stipulated within the existing framework for the public social security system, which involves a gamut of public ministries and departments. Since 1994, EMERCOM has been acting as the federal coordinator orchestrating and directing the efforts of all of the state bodies involved in the alleviation of radiation accidents and disasters. EMERCOM provides guidance and organizational support to the respective federal executive bodies, the regional and local authorities, and various enterprises and organizations. Likewise, legal and medical support has been provided to people affected by radiation accidents (including the Chernobyl liquidators). EMERCOM also executes control over the implementation of such measures. In general, EMERCOM works more with operational issues, yet recovery from the Chernobyl accident and other similar disasters requires more strategic long-term efforts. This calls for a special organizational system which can implement the social security policy for those affected by Chernobyl and other similar accidents (Grishin, 1999).

In my opinion, the liquidators' standard and quality of life is a key indicator of the effectiveness of the social security policy. As mentioned above, the existing law stipulates considerable privileges and compensation to the liquidators, but as social monitoring shows, implementation procedures are inadequate and this in itself has contributed to a creeping crisis. The values threatened by this crisis involve individual well-being, health care, standard of living, employment, social protection and guaranteed governmental support. The essence of the crisis lies in the fact that community bonds and normal social routines were broken. There were failures in the implementation of legitimate guarantees and the respective authorities poorly executed their duties.

These claims are supported by the findings from a sociological survey of the liquidators. This survey was carried out by mail by the Department of Social Problems and Risks at the Institute of Sociology of the Russian Academy of Sciences led by Alla Mozgovaia and was financially supported by EMERCOM. The analysis of this survey was restricted to two questions directly related to crisis management issues.

Question #1: "As a liquidator you have had to submit applications to various organizations and have had contact with many different agencies. Where and what aid have you applied for in the last 2–3 years, and what has been the outcome of these efforts? How did you feel you were treated? Did you receive the help you needed?"

This question was constructed in order to find out which state agencies, organizations, and social institutions were most involved in the execution of the federal law on social security for the Chernobyl liquidators.

Question #2: "Please list what kind of social security and social support you expect from the state."

This question was aimed at determining whether the liquidators considered themselves as a specific group in need of a special social security policy. It was also intended to identify the specific kinds of social aid which are needed, and to reveal the liquidators' knowledge about which social institutions are responsible for protecting their interests. Table 1 summarizes the findings from the liquidators' responses regarding the social security policy.

Table 2 provides data on the specific privileges and compensation which the liquidators applied for from various agencies and organizations and the outcomes of such applications. The survey revealed that most of the privileges designated for the liquidators had not been awarded by the responsible agencies. The bulk of the respondents felt that the social security legislation had not been put into practice. The respondents also stressed that they felt "deceived by the state."

Table 1: The Results of the Liquidators' Applications for Privileges in Three Russian Regions

Region	The Outcome of Applications (%)	
	Successful	Failed
Briansk region[25]	20.5	79.5
Vladimir region	21.0	79.0
Moscow region	30.8	69.2

[25] The Briansk region was the Russian region worst hit by the radiation fallout. The Vladimir region and the Moscow region are used here as reference groups for comparison.

This survey and a few other studies reveal that many of the liquidators felt morally devastated by the lack of "sincere human concern" from some of the administrators and bureaucrats. Often the liquidators were met with statements like: "I don't know anything," "I can't do anything," or "I didn't send you there [Chernobyl]."

The survey also revealed that the liquidators felt they did not have any social protection in terms of the most important elements for survival: employment, financial security, decent living conditions, good health, medication, health care, or psychological and emotional support.

The main social security issues for the liquidators included their own personal concerns and often the concerns and problems of their families. However the social security policy has focused primarily on the individual and does not include the concept of the family as an affected unit.

Table 2: The Liquidators' Applications for Privileges and Compensation

Privileges	The Outcome of Applications (%)	
	Successful	Failure
Pension insurance	80.2	20.0
Vouchers to clinics	66.7	33.3
Food subsidies	66.7	33.3
Financial support	62.5	31.5
Discount for utility services and apartments	54.5	45.5
Yard and garden lots	37.5	62.5
Discounted food	36.4	63.6
Coupons, cards, certificates	25.0	75.0
Compensation for unused vouchers	25.0	75.0
Discount for buying a car or a motorcycle	23.8	76.2
Garage space	20.0	80.0
Improvement of living conditions	16.2	83.3
Subsidized loans	14.3	85.7
Telephone installation	13.8	86.2
Income tax breaks	11.1	88.9
Privileged commodity prices	5.9	94.1
Property for a private building	0.0	100.0
Employment services	0.0	100.0
Privileged conditions for starting a business	0.0	100.0
Subsidized travel costs	0.0	100.0
Convenient vacation time	0.0	100.0
Child allowance	0.0	100.0
Help in repairing a house or an apartment	0.0	100.0
Children subsidies	0.0	100.0

In addition, the results of the sociological survey revealed that a number of liquidators' claims for privileges were not granted even though they were entitled to them. This means there is a gap between the formally declared privileges and the real needs of the liquidators. The existing legislation regarding privileges for the liquidators is largely ignored and overlooks many of the liquidators' basic needs (Mozgovaia and Shlikova, 1994). The Chernobyl victims and people who lost family members have protested and gone on hunger strikes demanding compliance of the existing legislation concerning their privileges and rights (Kachaeva, 1999). The liquidators have also tried to defend their civil rights in court by suing the responsible state agencies. Court hearings are often long and drawn-out, and require specific knowledge, patience, and good health, most of which the liquidators obviously lack (Grishin, 1999).

Thus there is a significant need to change the state social security policy for the liquidators in order to provide better coordination between the responsible departments and agencies, and to ensure that the laws are implemented. Functioning communication systems should exist between and within the various government departments, and the system should include tough sanctions against those who choose to ignore the law. Channels for the exchange of reliable and operative data should also be established or improved in order to provide timely information to the public and to specialists. However, it took one year for critical information on the social and medical services available for the liquidators at the local level to reach the desks of the responsible federal and regional state organizations.

Moreover, there is a high risk that the current personnel working for the departments responsible for the social security policy will be cut due to financial constraints. Their functions would then be transferred to other departments, which are not familiar with such activities; thus, adversely affecting the quality of the decision-making process and the implementation of the laws (Grishin, 1999).

The Union Chernobyl of Russia: The Liquidators' NGO

The NGO "Union Chernobyl" is a voluntary association for the liquidators of Chernobyl and the victims of other radiation disasters. This NGO has been working for ten years to protect the interests of

the liquidators and the victims of radiation. Union Chernobyl is active in every Russian region and includes, among others, the following subgroups: "Children of Chernobyl," "Workers of Chernobyl," "Veterans of Chernobyl," and "Invalids of Chernobyl."

The President of Union Chernobyl, V.L. Grishin, strongly emphasized the role of the organization in influencing the social security policy. The regional chapters of Union Chernobyl have a close link to the affected communities and thus can obtain valuable up-to-date information on the local members. This data provides a good foundation for a more detailed analysis of the financial situation and living conditions of the Chernobyl liquidators and victims. In addition, it helps to quickly identify those people most in need and thus can provide appropriate support. The organization also facilitates as a sort of liaison, which helps minimize all of the bureaucratic red tape, and in this regard provides transparency into fund allocation and the distribution process.

In addition to the traditional NGO function of monitoring law compliance, the regional chapters of Union Chernobyl are authorized to control and improve the distribution of federal funds for implementing the targeted federal programs for recovery work. EMERCOM granted Union Chernobyl the power to do this. EMERCOM sees to it that federal funds are used for that there were intended. Nevertheless, the unauthorized use of such funds in Russia, especially at the regional level, is prevalent.

The administrative and spatial structure of Union Chernobyl enables an accurate registration of the various categories of invalids and liquidators in terms of their medical situation and social security needs. Influence over the local administration's activities helps in addressing the concerns and needs of those affected by the Chernobyl disaster (Grishin, 1999).

Union Chernobyl has carried out large-scale activities over the past ten years and the organization has had a significant role in improving the social security policy for the liquidators and the affected communities. There are several examples of this. In 1991 special bodies were created to oversee this policy development and implementation, Union Chernobyl provided its own funding and organized the mobilization of resources (including medical equipment, medicine and food) for the affected people. It also paid for medical treatment and health care both in Russian and foreign hospitals and

clinics. That same year Union Chernobyl organized an international charity for the Children of Chernobyl in order to collect additional funds for the implementation of the above mentioned programs.

By 1993 the Moscow regional chapter of Union Chernobyl alone helped organize about thirty commercial firms in collecting money to help the Chernobyl victims. In 1995 the President of Union Chernobyl appeared on a national TV talk show, which discussed the Chernobyl disaster. The talk show drew the attention of millions to the serious problems inflicting the Chernobyl victims. Union Chernobyl has had many other achievements. Perhaps most importantly, it has helped to create a sort of camaraderie and a support group for those coping with post-traumatic stress.

Social and Psychological Support for the Chernobyl Victims

A number of scholars have organized special services for providing social and psychological aid to the Chernobyl victims. For instance, the small state enterprise "Votum-psi" at the Institute of Psychology of Russian Academy of Sciences organized a counseling center which works together with regional services and centers.

With support from EMERCOM, the Center of Social and Psychological Support was established in the town of Novozybkov in the Briansk region. This center receives assistance from the Department of Medical and Biological Consequences at the Serbsky Institute of Forensic and Psychiatric Expertise. UNESCO provides methodological and financial support to 64 projects run by three social aid centers. One center is located in the town of Uzlovaya in the Tula region and another is in the town of Bolkhov in the Orel region (people living in these areas have the right to relocate at the state's expense). One more center is in the village of Nikolskaya Sloboda in the Briansk region where the evacuated residents were relocated. In 1995 the Center of Social and Psychological Rehabilitation for the Liquidators was organized in Moscow. EMERCOM's Department for the Alleviation of Radiation Disasters coordinates activities carried out by all of the above mentioned centers.

These centers provide assistance in the area of social security for the communities affected by Chernobyl disaster. The centers' employees provide medical care and psychological assistance, organize

clubs and juridical consultations, and share information on environmental safety and hygiene. They also monitor the social and psychological status of the affected communities and develop recommendations for solving the existing problems. They inform the authorities and the responsible organizations about the most serious and urgent issues concerning the communities, and organize lectures and seminars.

The positive impact of this work (mainly the mitigation and prevention of stress disorders) has been highly acclaimed at many national and international conferences. Likewise, the public's understanding and sympathy for the liquidators' problems has increased. The positive effects of this social and psychological aid can not be overestimated.

Union Chernobyl prepared recommendations and assisted in organizing special information and counseling services for the liquidators (as a specific group) in accordance with EMERCOM. Likewise, the liquidators' needs (in terms of social, medical and legal services) are registered. In addition to the existing centers mentioned above, a few more centers have been organized in Moscow (i.e. the Center for the Social and Psychological Rehabilitation of the Liquidators), in the Urals, and in southern Russia (Marchenko and Mozgovaia, 1996).

Lessons Learned

The ongoing creeping crisis for the liquidators and their families is far from resolved. Permanent changes are underway in the management of the national social security policy for the victims of Chernobyl. However, if the changes in the institutional and legal framework are actually someday implemented then there is hope that the Government will deal with the crisis more effectively. Given the long-term consequences of the Chernobyl disaster, a number of actions would be beneficial now and in the foreseeable future. These recommendations are:

- Official recognition that many liquidators were mobilized for the rescue work in Chernobyl via conscription and consequently, the state is responsible for providing these individuals and their families with the necessary aid and social security.

- Improvement of the existing legislation with particular attention given to the real needs of the liquidators and their families.
- Shifting the focus of the social security policy from the individual liquidator to include his (her) family as a whole.
- Increased coordination between various agencies and organizations involved in enforcing the Chernobyl Law. Consideration should also be given to organizing a special state body to oversee the problems in the national social security policy for the Chernobyl victims.
- Combining the 'total assistance' approach with individual help for the individual liquidators and their families (i.e. recognizing the Chernobyl rescue workers as a specific group).
- Building up information channels for exchanging reliable information and operative details between the crisis management actors involved in the issue of social security for the liquidators.
- Bringing together the efforts of the state agencies and the NGOs (active in the national social security policy) in order to try to repay the nation's debt to the Chernobyl rescue workers in exchange for their service to the state.

References

Amiryants, G.A. (1991) *Ja Ne Govoryu Prostchai...[I Am Not Saying Good-Bye...]*. Moscow: The Russian-American University.

Arskiy, Yu. M. (Ed.) (1991) *Itogoviye Materiali Expertnoi Komissii Gosplana SSSR po Rassmotreniyu Gosudarstvennich Programm Likvidatsii Posledstvii Avarii na Chernobylskoi AES [A Summary of the USSR State Expert Commission on State Programs for the Liquidation of the Chernobyl NPP Accident]*. Moscow: Znanie.

Barazgova, E.S. (1977) *Amerikanskaia Sotsiologia. Traditsii i Sovremennost [American Sociology: Traditions and Current Trends]*. Ekaterinburg: Delovaya Kniga.

Bobneva, M.I. (1992) "Nekotoriye Problemi Fobii i Gruppi Riska v Kontexte Psikhologicheskikh Podkhodov" ["Phobia Problems and Risk Groups in the Context of Psychological Approaches"]. In *Chernobylskii Sled Mediko-Psikhologicheskye Posledstviya Radiatsionnogo Vozdeistviya. Chast' II [Traces of Chernobyl: The Medical and Psychological Consequences of Radiation. Part II]*, edited by M.I. Bobneva, pp. 207–220. Moscow: MGP Votum-Psi.

Chernobyl: Tragediya, Geroism, Preduprzhedniye (1988) [*Chernobyl: Tragedy, Exploitation, Warning*]. Moscow: Planeta.

Federalnaia Tselevaia Programma "Snizheniye Riskov I Smiagcheniye Posledstvii Chrezvichainikh Situatsii Prirodnogo I tekhnogennogo Kharaktera v Rossiiskoi Federatsii do 2005 goda (1999) [*The Federal Target Program for Risk Reduction and Mitigation of Natural and Technological Disasters in the Russian Federation by 2005*]. Moscow, EMERCOM.

Geil, R. and T. Hozer (1990) *Posledinye Preduprezhdeniye: Naslediye Chernobylia* [*The Last Warning: The Legacy of Chernobyl*]. Moscow: Sovaminko.

George A. (1979) Case Studies and Theory Development: The Method of Structured Focused Comparison. In *Diplomacy New Approaches in History, Theory and Policy*, edited P.G. Lauren. pp. 43–68. New York: Free Press.

Gigevich, V.S. and O.I. Tchernov (1991) *I Stali Vodi Gorki: Khronika Chernobylskoi Bedi*] *And Waters Turned Bitter: The Chronicle of the Chernobyl Misfortune*]. Minsk, Belarus:

Golovaha, E.I. (Ed.) (1990) *Chelovek v Ekstremalnikh Proizvodstvennikh Usloviyalh. Opit Sotsiologicheskogo Issledovania Likvidatsii Posledstvii Avarii na Chernobylskoi AES* [*A Man in an Extreme Situation: The Sociological Survey on the Consequences of Liquidating the Chernobyl Accident*]. Kiev: Naukova Dumka.

Grishin V.L. (1999) "Problemi Sotsialnoi Zaschiti Grazhdan Postradavshikh ot Radiatsionnogo Vozdeistviya Vslestviye Avarii na Chernobylskoi AES" ["Problems of Social Security for the Citizens Affected by Radiation as a Result of the Accident at the Chernobyl Nuclear Power Plant"] *Problemi Bezopasnosti Pri Chrezvichainikh Situatsiakh*, No 4, pp. 3–13.

Illesh, A.V. and A.E. Pralnikov (1988) *Chernobylskaia Tetrad: Zametki Ochevidtsev.* [*Chernobyl Notebook: Memos from the Eye-Witnesses*]. Moscow: Mysl.

Kachaeva, I. (1999-12-1) Oni Pali v Bor'be za Vigodu. [They Fall in Battle for the Benefit]. *Trud*.

Kaibysheva, L.S. (1996) *Poslye Chernobylia.* [*After Chernobyl*]. M.: IzdAT.

Kirilenko, S.I. (1992) "Yadernaia Fobia. Osobennosti Formirovaniya i Razvitiya Obrazov" ["Nuclear Phobia. Peculiarities of Image Construction and Development"]. In *Chernobylskii Sled. Mediko-Psikhologicheskye Posledstviya Radiatsionnogo Vozdeistviya. Chast' II.* [*Traces of Chernobyl: The Medical and Psychological Consequences of Radiation. Part II*], edited by M.I Bobneva, pp. 221–230. Moscow: MAP Votum-Psi.

Kovalevskaya, L.A. (1990) *Chernobylskii Dnevnik* [*The Chernobyl Dairy*]. Kiev: Radianski Pismennik.

Kuchmii; I.V. (Ed.) (1996) *Sbornik Informatsionnikh Materialov o Zakone Rosiikoi Federatsii o Sotsialnoi Zaschite Grazhdan Postradavshikh ot Radiatsionnogo Vozdeistviya Vslestviye Avarii na Chernobylskoi AES.*

Chast' I [*A Collection of Information on the Russian Federation Act 'Social Security for the Citizens Affected by Radiation as a Result of the Accident at Chernobyl Nuclear Power Plant.' Part 1*]. Moscow: Mettalourgia.

Marchenko, T.A. and A.V. Mozgovaia (1996) Sotsialniye i Psikhologicheskiye Posledstviya Avarii na ChAES: Opit Issledovaniya i Praktiki Sotsialnoi Raboti [The Social and Psychological Consequences of Chernobyl NPP Accident: Social Work Experiences and Practices]. In *Sotsialnaia i Psikhologicheskaia Reabilitatsiya Postradavshikh ot Chernopbylskoi Katastrofi: Opit i Perspektivi.* [*Social and Psychological Rehabilitation of the People Affected by the Chernobyl Disaster: Experiences and Perspectives*], edited by A. Mozgovaia and V. Sorokin, pp. 40–49. Moscow: Institut Sotsiologii RAN.

Marchenko, T.A. and V.S. Sorokin (1996) "State Regulations Regarding Social Security and the Victims of the Chernobyl NES Accident." In *Sotsialnaia i Psikhologicheskaia Reabilitatsiya Postradavshikh ot Chernopbylskoi Katastrofi: Opit i Perspektivi* [*Social and Psychological Rehabilitation of the People Affected by the Chernobyl Disaster: Experiences and Perspectives*], edited by A. Mozgovaia and V. Sorokin, pp. 20–39. Moscow: Institut Sotsiologii RAN.

Mozgovaia, A.V. and E.V. Shlikova (1994) Kachestvo Zhizni Uchastnikov Likvidatsii Chernobylskoi Katastrofi. [The Quality of Life for the Chernobyl Rescue Workers: Materials from the Sociological Survey]. Moscow: Institute of Sociology RAS.

Odinets, M.S. (1988) *Chernobyl: Dni Ispitanii* [*Chernobyl: The Days of Trial*]. Moscow: Yuridicheskaya Literatura.

Porfiriev, B.N. (1996) "Chernobylskaia Katastrofa: Prichini i Posledstvia" ["The Chernobyl Disaster: The Causes and Consequences"]. In *Sotsialnaia i Psikhologicheskaia Reabilitatsiya Postradavshikh ot Chernopbylskoi Katastrofi: Opit i Perspektivi* [*The Social and Psychological Rehabilitation of the People Affected by the Chernobyl Disaster: Experiences and Perspectives*], edited by A. Mozgovaia and V. Sorokin, pp. 9–19. Moscow: Institut Sotsiologii RAN.

Roy, O.M. (Ed.) (1994) *Sotsialnaia Ekologia: Opit Systemno-analyticheskogo Issedovania.* [*Social Ecology: The Experiences of System-Analytical Research*]. Omsk: OmGY.

Sbornik Informatsionno-Normativnikh Documentov po Voprosam Preodoleniya Poslestvii Chernobylskoi Katastrofi v Rosiikoi Federatsii [*Collection of Information and Normative Documents on the Issue of Overcoming the Consequences of the Chernobyl Disaster in the Russian Federation*] (1993) Moscow: IzDat.

Scherbak, Yu. (1991) *Chernobyl.* Moscow: Sovetskii Pisatel.

Shcoda, V.G. (Ed.) (1989) *Soldati Chernobylia* [*The Soldiers of Chernobyl*]. Moscow: Voenizdat.

Sotsialniye L'goti i Garantii Zhitelei Moskvi. Spravochnik (1977) [Social Privileges and Guarantees for Moscow Residents: A Handbook]. Moscow: AGAR.

Svedin, L. (1999) "Mc-krig i Sverige och Norden 1994–97" ["Motorcycle Gang Wars in Sweden and Scandinavia: 1994–1997"]. In *Crisis and Internationalization: Eight Cases Studied From a Cognitive-Institutional Perspective,* edited by Eric Stern and Fredrik Bynander, pp. 204–239. Stockholm: The Swedish Agency for Civil Emergency Planning.

Tarabrina, N.V.; E.O. Lazebnaya; M.E. Zelenova; and V.A. Agarkov (1996) Psikhologicheskiye Posledstviya Perezhivania 'Nevidimogo Stressa' ["Psychological Consequences of Reviving the Invisible Stress"]. In *Sotsialnaia i Psikhologicheskaia Reabilitatsiya Postradavshikh ot Chernobylskoi Katastrofi: Opit i Perspektivi. [The Social and Psychological Rehabilitation of the People Affected by the Chernobyl Disaster: Experiences and Perspectives]*, edited by A. Mozgovaia and V. Sorokin, pp. 97–119. Moscow: Institut Sotsiologii RAN.

Tukov, A.A. (Ed.) (1995) *Kompleksnaia Programma Rossiiskogo Ministerstva Obrazovaniya 'Pomosch': Kontseptsii, Struktouri, Soderzhaniye* [*An Integrated Program from the Russian Ministry of Education. Help: Concepts, Structures, Contents*]. Moscow: Department of Pedagogy, University of Moscow.

Verkhovnii Soviet RSFSR. *Tretia Sessiya. Biulleten' #12 Sovmestnogo Zasedaniya Sovieta Respubliki i Sovieta Natsionalnoistei 20 Fevralia 1991 goda* (1991) [*Third Session of the RSFSR Supreme Soviet. Bulletin #12 of the Joint Session of the Council of the Republic and the Council of Nationalities – February 20, 1991*]. Moscow: Izdaniye Verkhovnogo Sovieta PSFSR.

Verkhovnii Soviet SSSR. *Tretia Sessiya. Biulleten' #31 Sovmestnogo Zasedaniya Sovieta Soyuza i Sovieta Natsionalnoistei 25 Aprelia 1990 goda* (1990) [*Third Session of the USSR Supreme Soviet. Bulletin #31 of the Joint Session of the Council of the Union and the Council of Nationalities – April 25, 1990*]. Moscow: Izdaniye Verkhovnogo Sovieta SSSR.

Voznyak, V.Ya. and S.N. Troitskiy (1993) *Chernobyl: Kak Eto Bilo. Vzgliad Iznutri.* [*Chernobyl: How It Happened. A Glance from Within*]. Moscow: Libris.

Voznyak, V.Ya.; A.P. Kovalenko; and S.N. Troitskiy (1989) *Chernobyl: Sobitia i Uroki.* [*Chernobyl: Events and Lessons*]. Moscow: Politicheskaya Literatura.

Yaroshinskaya, A. (1992) *Chernobyl: Sovershenno Sekretno* [*Chernobyl: Top Secret*]. Moscow: Drugie berega.

Chapter 6
Crisis Management of the Ecological Disaster in the Town of Karabash

Alla Mozgovaia

Introduction

This chapter considers both the general and specific characteristics of Russian crisis management in dealing with the conflict between environmental issues and the economy. There is a conflict between public core values (such as the right to health and well-being as stipulated in the Constitution of Russia) on the one hand, and public and private business interests (employment and profits) on the other hand. Such conflicts exist in Russia largely in small and medium mono-industrial towns. The economy and the entire survival of these towns is completely dependent upon just one or two companies (usually heavy industries or mining plants). Closing down these companies would turn these towns into ghost towns.

Brief Outline of the Crisis Situation

In the early 1990s, the town of Karabash (a small mono-industrial settlement in the Urals region of Russia) ended up in such a dilemma. The ongoing operations at the town's hazardous facilities have had adverse effects on the environment and human health (especially that of the town's children).

Therefore the town's environmental activists have demanded that the local authorities take urgent measures to protect public health and the environment by stopping the hazardous production. Supported by a part of the local community, the environmentalists have successfully pressured the local and regional administrations into suspending some of the work at the hazardous installations (including a large metallurgical complex).

As a result, some of the employees have lost their jobs and they have no other real job opportunities. In turn, this has aroused discontent and protests from the newly unemployed and their families. People interested in keeping the metallurgical complex in operation, but under new ownership, used this situation for their own benefit and bought up the depreciated company shares previously held by the employees. In following the 1995 Environmental Expertise Act and the recommendations put forth by a federal expert task commission, the Karabash municipal administration prepared a report for officially declaring the town an ecological disaster zone. In compliance with the 1991 Environmental Protection Act, financial assistance and other measures should follow such a declaration.

Definition of a Crisis

The vast body of crisis management literature reveals a variety of crisis definitions. It also indicates that the very notion of a crisis is constantly being discussed as new kinds of crises emerge. Nevertheless, most specialists in the field agree upon a number of basic criteria concerning the concept of a crisis. These include uncertainty, a threat to a core value (which is discussed to a large extent in this chapter) and limited time.

The crisis definition suggested by the Swedish scholars from CRiSMART is largely focused on management issues and thus is restricted to the perceptions which managers and decision-makers have of a crisis situation. This definition of a crisis "includes central decision-makers perceiving the situation as entailing that core values are threatened. Limited time for decision-making and response is available and the circumstances involve a high level of uncertainty" (Hart, Stern and Sundelius, 1998; Stern, 1999: 8; Svedin, forthcoming).

In my opinion a couple of important features are missing here which I feel should be added to the abovementioned definition. I define a crisis as a situation embedded with threats to a community's core values and survival. These threats result from the lack of efficient management tools and means for mitigating or preventing an accidental breach in the social and organizational order at the local, national, international or organizational level.

This conceptualization deviates from the crisis managers' perception of a crisis. In many cases, however, the situation may be perceived as a crisis by the general public but not by the decision makers and/or the crisis manager. This is something which is quite typical now in Russia. It is important in crisis management research that the question "A crisis for whom?" is raised.

A Crisis for Whom?

The situation in Karabash should be regarded as a crisis for a number of reasons. First, unregulated and uncontrolled privatization of the key plants, which were the backbone of the town's economy and community well-being, considerably aggravated the problems. This threatened the very existence of the town as a community. However, this did not (and still does not) worry many of the new shareholders of the privatized metallurgical complex since the new owners are not residents of the town.

Meanwhile, the lives of the town residents have literally been put on the line; their sheer existence has been severely jeopardized. In addition, the increasing environmental deterioration hurts the *spiritual and moral values* of the contemporary and future generations by actually destroying their neighborhoods and forcing them to move from family property in search for a better life for themselves and for their children. Unemployment and an acute shortage of funding for the town infrastructure should be added to the overall grim picture.

Furthermore, the municipal and regional administrations are confronted with hard problems such as civil disorder, mass disturbances, and protests. The environmental activists are supported by the mass media not only at the local level but also at the regional and federal levels. Given this, the local and regional authorities could be considered crisis victims despite the fact that they bear the bulk of responsibility for the escalating crisis. At the same time, these administrations have to deal with the crisis. It is important to remember that crises are difficult to handle even when standard routine administrative procedures exist; crises demand specific crisis management tools.

Background

The town of Karabash is located in the eastern foothills of the Southern Urals and in the watershed of the Atkus and Sak-Elga Rivers which drain into the Miass River. This region is the oldest mining ore region in the Urals dating back to the first half of the 18th century. The settlement began to grow rapidly after rich gold-bearing deposits were discovered in Sak-Elga River Valley in the 1820s. The first copper ore deposits were discovered thereafter and this gave birth to a small copper smelting plant in the area. By the beginning of the 20th century Karabash had turned into a large industrial center and a big copper smelter was built in 1910. This plant produced almost a third of the total copper smelted in Russia at the time. Subsequent technological changes at the plant enabled the production of zinc concentrates from copper and zinc ores.

In the early 1930s three mines were operating in Karabash with the total ore stock amounting to 3,505 thousand tons, of which 84,500 tons were copper ore. In 1913 the production of copper ore was 343,000 tons. In addition, 19,500 tons of sulfur pyrites and 9,300 tons of iron ore were extracted by almost 1,800 miners. The copper production output amounted to 6,500 tons (Malaia Sovietskaia Entsiklopedia, 1931: 707).

For two decades Karabash was a large center for ore mining and non-ferrous metallurgy industries. A huge copper smelter replaced the one constructed earlier in the century and a plant began producing copper concentrates. There were three secondary schools, one seven-year school, a mining and metallurgical vocational school, a school for on-site education and training at the plant, and thirteen libraries (Bolshaia Sovietskaia Entsiklopedia, 1951: 92). After more than three decades, the output capacity rapidly increased at the extracting and processing facilities which produced blister copper, high quality copper and zinc concentrates.

As a result, by the mid 1990s the town of Karabash had developed into a primarily mining and metallurgical area with over 16,100 residents. The region was filled with industrial plants, processed ore rock and slag dumps (tailings), wastewater reservoirs, and transportation and power units. There were dozens of one-story residential houses and a few five-story buildings in the northwest.

Environmental and Public Health Problems

By the late 1980s the evidence of years of hazardous material discharge (containing sulfur, copper, zinc, silver, gold, cadmium, arsenic and mercury) from the Karabash copper smelter began to surface. In 1989 the air-polluting production of copper concentrates was stopped. However, this did not help to improve the environmental quality given the fact that the production of copper metal continued with intensive dumping, which heavily contaminated the soil of the Sak-Elga River watershed. The tailings pond of copper pyrites covered nearly 15 hectares with heavy metals (such as iron, copper, and zinc) which washed into the rivers.

Up until 1989, metallurgical plants were processing more than 18 types of low quality copper ores, which did not even meet the requirements of the existing smelting regulations. Hazardous materials were discharged from the smelter furnaces into the air. Although the production of blister copper was stopped in 1989, as early as the next year a reverberation furnace was put into operation and environmental pollution continued. Despite the fact that the exhaust chimney was 127 m high, the surrounding area (roughly a 5–6 km radius) was affected. More specific data on environmental deterioration indicates that the copper complex was processing thousands of hazardous substances; primarily sulfur by-products which were discharged into the air. The level of air pollution caused by sulfur dioxide and lead (measured in both average annual and daily concentrations over the past three decades) conform to the Russian government's criteria for declaring an area an ecological disaster.

These chemicals have contaminated the forest soil and thus the natural reforestation process has been hindered. Beautiful birch and pine forests, which formerly were common in the area, have been destroyed. Degradation of the vegetation was very intensive during the 1950s, 1960s and 1970s. Mountains slopes were stripped and the mountain vegetation has receded several kilometers from the town. Only a few small islands of vegetation can be found in the residential areas where the town dwellers grow vegetables and fruits which are contaminated with arsenic, mercury and lead.

The level of contamination in the surface water caused by copper, zinc and iron exceeds the maximum permissible concentrations in degrees of magnitude. For instance, the aggregate contamination index of copper, zinc, iron, and phenol (well known for being an ex-

tremely dangerous chemical) exceeds the maximum permissible limit by 1,018 fold! By any existing criteria, this complies with the notion of an ecological disaster (Zakluchenie, 1996).

The deplorable state of the environment has considerably impacted the health of the local people, especially that of the children. The prenatal infant mortality rate in Karabash is much higher than that in the reference groups (the so-called 'clean communities'); infant morbidity is 1.5–2 times higher in Karabash. Disorders debilitating the nervous system, upper respiratory tract, osseous muscular, the digestive system, the immunity system, the skin, and blood circulation are prevailing and widespread. Not surprisingly, the state of physical development of the local people is 5–8 times worse than of those in the reference groups.

The Crisis from the Outside

The once picturesque lakes and mountains covered with birch forests surrounding the town of Karabash looked much different in the mid to late 1990s. The mountains had been stripped mined, and the vegetation was in a sad state. The local residents justifiably described it as "moon landscape."

One-story ramshackle wooden houses without any modern facilities are typical in the so-called private housing sector; family-owned homes are located in the old part of town. There are a few relatively new blocks of two-story, three-story and five-story buildings. Likewise, there are two-story barracks lacking adequate facilities, which accommodate many families. The streets are not lighted. Municipal buses are in shortage and bus traffic is irregular. Shops are empty and the few commodities available are much more expensive than those in the regional center of Cheliabinsk (a city with more than one million residents).

Among the 16,000 Karabash dwellers, the elderly and the very young dominate in sheer numbers with just a small percentage of middle-aged people. Previously the town's population had been replenished by political prisoners sent to exile. Most of the male population does not work, and many people are strongly addicted to alcohol. Children are sluggish, and have pale faces with dark circles under their eyes. Unsurprisingly, many of them attend a special school for mentally retarded children. Every other town dweller suf-

fers from some sort of allergy and many have problems with their respiratory organs and liver. Many relatively young and elderly people are toothless. The mortality rate among both adults and children is very high.

Many of the town dwellers (including very small children and old women) can be seen busy digging out copper from the heaps of waste from the copper smelter. The extracted metal is sold in an attempt to make a family living. When the ground becomes totally frozen, these same people cut the telephone cables in order to extract the copper. For this reason, several of the local telephone lines are not in working order.

The industrial enterprises have historically been the backbone of the town and have provided the local residents with employment. The industrial cooper complex has been reorganized into a joint stock company. Formally, all operations are suspended. Meanwhile in practice, a network of cooperatives, small businesses, mini-joint stock companies (all under the canopy of the idle metallurgical complex) have continued production but on a smaller scale. The plant management has tried to re-establish full production but without much luck.

One more curious fact about the metallurgical complex is that the plant, which is no longer in function, has had its shares in big demand on the stock exchange. The plant management succeeded in raising support from part of the local community and the town and regional administrations for putting the company's shares on the stock market, while others were strongly opposed to this. Such tension is easy to understand given the fact that people felt they personally had conflicting interests. For example, increased production would mean more jobs and better job security, yet perhaps more problems for the environment and human health; a total or partial closure would mean increased unemployment but perhaps increased hope for the environment.

The town administration has been fairly ambiguous to all of these issues. A program for plant renovation was developed in 1987 which included the introduction of safer modern production technology and a more efficient treatment system. However, an economic survey later proved that it was impossible to install new equipment because of a shortage of funds and time, and eventually the local administration just gave up.

Much the same seems to be happening to the new employment program, which has created 2,000 new jobs thanks to the new production lines introduced at a radio factory. According to the local administration, this should help cope with the unemployment problem without having to re-launch the operations at the metallurgical complex and the other hazardous facilities in Karabash. Apparently, this increased the tension between part of the local administration (who supported the new employment program) and the plant management and their lobbyists. The latter group argued that "one cannot do anything without the plant"; a mentality largely ingrained in the minds of the local community. Yet on the other hand, most of the townspeople and many of the local authorities were convinced that something had to be changed.

The Crisis from the Inside

A sociological survey conducted in 1999 provided data on both the actual and the perceived socio-economic situation in Karabash including health and well-being, social security, standard of living, migration, working conditions, and family life. These issues were considered within the specific context of the respondents' ecological views and attitudes. The survey involved a random and non-recurrent poll of the local public opinion. The respondents were chosen from the list of registered voters and by following certain principles in order to ensure a random selection. There were 302 respondents. The accuracy error did not exceed 5% with the probability level at 0.95 and dispersion at 0.25. Thus, the analysis included a representative sample with an acceptable level of reliability.

The survey revealed that the public (individually and as a whole) has experienced significant amount of environmental stress and a number of serious problems in almost every sphere of life. There is a clear conflict between environmental and economic interests. The local residents believe that once this conflict is resolved, all of the other problems would more or less disappear.

The majority of respondents considered their health to be poor; more than a half of them suffer from some chronic disease. These chronic diseases can be directly linked to the poor environmental conditions in Karabash. Often the organs are affected and many suffer from neurological and cardiovascular disorders. The respon-

dents with young children noted a high incidence of certain diseases, including larynx disorders and allergies. More than 70% of the respondents said their state of health in the past two or three years had significantly worsened citing elevated blood pressure, joint pains, cardiovascular disorders and a deterioration of their general physical well-being. In some groups this number was as high as 90% of the respondents.

Most of them directly attribute their poor physical condition to the disastrous state of the local environment. Nearly 80% of the respondents mentioned a significant decrease in the local environmental conditions over the past decade. They blamed this on the industrial complex, the town's administration and the town residents. The bulk of respondents also blamed the plants located in the vicinity of their houses. The copper smelter (from 70% to 90% of the respondents), the asphalt production facility and the aforementioned restricted zones around the town (which are discharging heavy metals into the air) were also mentioned. Given this, it is not surprising that 50% to 80% of the people in the various respondent groups said that they were ready to protest any further ecological deterioration.

In addition, every respondent group mentioned some degree of dissatisfaction with the existing state of the environment and the existing level of social security considering their exposure to harmful ecological conditions. The respondent groups expressing the highest level of concern were those who had least a high school education currently living in the area with young children. Up to 20% of the respondents reported that they did not have strong marital ties and 17% attributed this to their spouses' health problems caused by the poor ecological conditions in Karabash. The survey revealed that many of the residents who are of working age and/or in their childbearing years intend to move from the Karabash area.

To sum up, the survey findings support the previous claims that the community of Karabash is living in an ecological disaster zone. This resulted from years of irresponsible environmental management on behalf of the local industries and an immoral ecological policy carried out by the local and regional authorities. However, it would be naive to think that Karabash is unique in this regard. Extensive studies on the environmental policies carried out by the former Soviet Union and contemporary Russia also highlight serious

ecological problems. First of all, a comprehensive environmental policy was lacking in the Soviet Union. Then after one was created, it was terribly ineffective (see Porfiriev, forthcoming). In the broader perspective, the Karabash crisis serves as a good example of how transitional societies often disregard the smaller communities' environmental concerns when shaky political, social and economic conditions exist. Non-traditional means and methods need to be implemented in order to cope with the ecological crisis in Karabash.

Efforts to Cope with the Crisis

In compliance with the 1995 Environmental Expertise Act of the Russian Federation (Zakon, 1995), the Karabash and regional administrations prepared a report with a number of appendixes and submitted these documents to the federal government in 1996. The Environmental Expertise Commission (hereafter referred to as simply the Commission) was expected to analyze the submitted material and propose recommendations to the Government and to the President of Russia. These recommendations strengthened the argument of declaring part of Karabash as an ecological disaster area and declaring the other part as an ecological emergency area in compliance with Articles 58 and 59 of the amended 1991 Environmental Protection Act of the Russian Federation. Such a declaration would be accompanied by funding.

> **Article 58 states:**
> In the Russian Federation territory an ecological emergency area must be declared where the natural environment has undergone negative changes and endangers or threatens human lives, the ecosystem, or certain plant and animal species.
>
> In ecological emergency areas all activities, which produce any negative effects upon the natural environment must be stopped. Activities by enterprises, institutions, organizations, or equipment usage with adverse effects upon human health, the human genetic fund or the natural environment must be suspended, and some type of natural resource management must be implemented. In addition, adequate and comprehensive measures for the

recovery and reproduction of natural resources must also be implemented.

Measures for bringing such areas back to an acceptable state must obtain funding primarily from the respective ministries, agencies, enterprises, institutions, and organizations directly responsible for environmental deterioration, industrial accidents or disasters. Likewise, federal and regional funds should also be allocated (Paraphrased from Zakon, 1991).

Article 59 states that:
In the Russian Federation territory, an ecological disaster area must be declared where the natural environment has undergone deep and irrevocable changes (because of economic or other activities), which entail a significant worsening of human health, environmental deterioration, destruction of a natural ecosystem, or the devastation of flora and fauna.

In areas declared an ecological disaster, all economic agents have to cease their operations (except those providing services to the local people). The construction and reconstruction of any new economic facility is prohibited. All types of natural resource usage have to be considerably limited. Adequate and comprehensive measures should be implemented in order to restore the production of natural resources and to reestablish a sustainable natural environment (Paraphrased from Zakon, 1991).

In addition, the extensive data on the state of environmental and human health in the ecological disaster area which was submitted to the Commission was used to draft the Federal Targeted Program "Prioritized Measures Taken Between 1996 and 2000 for Rehabilitating the Ecological Disaster Area and Restoring the Local Residents' Health in the Town of Karabash in the Chelyabinsk Region."

The Commission thoroughly scrutinized the submitted documents, visited Karabash for a field survey, and met with the local residents to discuss the existing situation. The Commission came to the conclusion (which was formerly approved by the Minister of Environmental Protection and Natural Resources) that "the respective indicators for the existing state of public health; the level of soil, surface and underground water contamination; conspicuous negative geological changes; and the deterioration of the surface ecological systems provide grounds for considering Karabash an ecological disaster area" (Zakliucheniye, 1996).

In addition, the Commission's recommendations provided two alternative programs for coping with the crisis. One of these suggested a partial renovation of the main metallurgical industrial complex, which would only address part of the environmental problem. The program would also include re-equipping the complex and setting up new treatment plants to process and recycle the industrial waste including that containing heavy metals. In addition, measures would be made to reconstruct the existing treatment plants and facilities, re-cultivate the soil, replant forests, and monitor certain diseases. The construction of residential houses for 500 families relocated from the hazardous area around the industrial complex was also taken up.

The other program included totally shutting down the hazardous copper smelting production and establishing new jobs for the local people. However, neither of the two proposals contained any concrete estimates about the projected costs and or information about the technical specifications. It is assumed that the program would be funded by the non-federal budget. Such funding would doom such programs for failure and they would never be properly implemented.

Nevertheless, the fact that a specific area was officially declared an ecological disaster area for the first time in modern Russia should not be undermined. In theory, when an area is declared a disaster zone by a governmental or presidential decree, a funded recovery program should be immediately launched (as is in accordance with the law). Yet the implementation of national disaster legislation is hindered by financial and legal constraints in Russia.

The Effectiveness of Crisis Management with Legal, Economic and Political Constraints

The town of Karabash has run into some difficulty concerning the local copper smelter given the fact that the privatization and licensing of such facilities within the metallurgical industrial complex were carried out by companies not associated with the town (and sometimes not even with the region of Chelyabinsk) either geographically or administratively. Thus, Karabash has found itself in a legislative vacuum with serious financial and environmental problems because of these economic reforms. These problems were worsened by the ineffective environmental policy and by the uncontrollable privatization process which lacked consideration for economic and ecological sustainability.

To some extent legislative grounds were established in order to prevent the chaotic and corrupt privatization of hazardous enterprises in the Presidential Decree No 2284 (dated December 24, 1993) called "The State's Role in the Privatization Program for Public and Municipal Enterprises in the Russian Federation" (and more specifically in Item 6.33 of this program). This document granted the State Property Committee, the Ministry of Environmental Protection and Natural Resources, and other relevant state agencies with the authority to develop and enforce rules concerning ecological standards in chemical and hazardous industries. A special legislative act made it obligatory to compile a list of such industries. Likewise, several other new acts have been introduced. Worth special mentioning are two: the State Property Committee and the Ministry of Justice Regulation (July 8, 1995) No. 791-p1 "Ecological Considerations while Privatizing Public and Municipal Enterprises and Organizations" and the Order of the Ministry of Environmental Protection and Natural Resources (November 21, 1995) No 469 with the same title. However, neither of these acts significantly influenced the situation at the already privatized hazardous enterprises.

After the Commission released its findings, there were no legal procedures for establishing formal rules for interaction between the various government authorities, the industries, and the community members. This has been the case regarding the issue of collecting and allocating financial resources for those areas coping with existing crises.

Regretfully, the Russian government has undergone significant successive changes since 1996: parliamentarian and presidential elections, an escalation of the armed conflict in Chechnya, terrorist bombings in a number of Russian cities, and other 'hot' political events. These events have taken the public's attention away from the creeping crisis in Karabash.

The Chelyabinsk regional administration managed to allocate some funds to reduce the severity of the Karabash disaster. In addition, some news about Karabash was shown on national TV in 1999 and 2000 claiming that Karabash is the world's most polluted settlement. However, this media attention did not help attract enough interest to generate more funding for Karabash.

Conclusion: Lessons from the Karabash Crisis

The creeping crisis in Karabash is typical in many ways of modern Russia both in terms of crisis development and crisis (mis)management. The nation has had to cope with a pile of serious problems left behind by the former Soviet Union . These problems have accumulated over the past decade resulting in a number of deficiencies and loopholes. In the former Soviet Union a substantial number of Karabash-like mono-industrial towns were established primarily for the needs of the totalitarian state. Such settlements were organized in order to serve the interests of the federal government, and regional interests were prioritized before local needs.

The restructuring of these mono-industrial towns' economies and the privatization of their industries were done without adequate state protection for the environment and human health. Even when the local authorities seemed to be able to control the situation, problems arose anyway because there was a lack of formal rules and regulations concerning the relationship between the federal, regional and local authorities on financial matters. As a result, both the local authorities and the town residents have become victims.

In particular, copper-smelting production continues in Karabash on a quasi-legal basis with nobody really knowing who, how and when measures will be implemented to deal with the ecological consequences. Russian and international experience has shown that victims of a crisis (i.e. the affected residents or the passive crisis actors) often evolve into active crisis actors or, in other words, crisis agents.

However this is not true in the case of Karabash. Those who can work and have savings have moved from Karabash in search for a better life; whereas the impoverished who are ill are stuck in Karabash and are, literally, dying out. The pubic is unaware of the crisis management plans or the authorities' intentions.

The findings and analysis in this case study provide a solid ground for referring to the Karabash as a systemic creeping crisis. This crisis is out of control given the fact that no political or social agent is willing to take responsibility for the crisis. This lack of responsibility and commitment in Karabash has been much more detrimental than the shortage of funds and concrete knowledge regarding the environmental or economical consequences.

The problems in Karabash are similar to those in a number of other Russian towns and cities. For instance, in northern Russia, mining towns are simply abandoned when the mines close and all of the environmental damage is just left behind. Socio-economic problems are exacerbated by poor environmental conditions which consequently intensify the cumulative adverse effects on a local community in general and on public health in particular.

An active joint effort from the local people, the local authorities, and the managers of the industrial enterprises can undoubtedly contribute to alleviating crises such as the one in Karabash. Yet the crisis agents have not yet consolidated their forces in order to be able to work effectively. Karabash is just one example; there are many towns scattered across Russia facing similar problems. Chapayevsk, a town in the Volga River region, is socially and economically dependent upon its chemical industrial complex. Another example is the town of Baikalsk, located on the shore of Lake Baikal (the world's largest fresh water reservoir and a unique ecosystem declared a UNESCO world heritage site), which is totally dependent upon its pulp and paper industry.

All of these cases contribute to the lessons learned in crisis management. When commercial profits dominate the public's basic needs and disregard the interests of future generations and sustainable development, the environment clearly suffers. Inevitably society's ecological culture is lost, and the public losses touch with ecological awareness and is pacified by empty promises. Eventually this can lead to ecological devastation with horrifying consequences.

Pooling together the efforts of the local residents, researchers, and practitioners would help raise public awareness and would help prevent similar problems from reoccurring in the future. These efforts would only be effective if considered comprehensively; that is, put into a broader framework for social and economic development. This would mean creating new jobs so there is a real alternative to the hazardous enterprises in the mono-industrial towns.

This strategy would definitely have to be operational in order to gain the public's support. Also concrete knowledge, scientific support, and the involvement of all crisis actors would be required. Any strategy is doomed for failure if it only considers the technological issues of a town's backbone industries and if other interests (specifically those of the community groups) are disregarded or superficially addressed. The needs, interests, values, traditions, and social links of a community are the real driving force of both social and economic development.

The restoration of civil society and its respective institutions in Russia is undoubtedly the most significant social achievement since totalitarism was rejected as a public ideology. In this connotation, the revival of local communities and their continued involvement are absolutely critical. Also ecology issues must be seriously considered. Unfortunately, the public's ecological awareness is strikingly low, and the official environmental policy of the Russian government is too ambiguous.

In short, legislation in Russia concerning environment protection must be improved and implemented effectively in a timely fashion. Civil society (as well as the mass media) has an important role to play, especially in this transitional phase. There must be ongoing debates in Russia regarding the various interests in society (environmental, economic, civil, and social) and crisis actors need to be prepared to encounter such value conflicts when a crisis arises. A society in transition is often plagued by resource constraints and infrastructural barriers; these are also important considerations for crisis actors, decision makers and government authorities. Furthermore ecological awareness needs to be strengthened in the government institutions, in business and among the general public.

And lastly (and perhaps most importantly) crisis actors, decision makers and government authorities have to have the insight and knowledge to see a creeping crisis coming. The situation in Kara-

bash developed slowly over a number of years. Crisis actors, government authorities, policy makers, community members, and businesses must be willing to work together as soon as signs of a crisis appear so that a larger crisis (as the one in Karabash) can be avoided.

References

Bolshaia Sovietskaia Entsiklopedia (1953) [The Big Soviet Encyclopedia]. Moskva: OGIZ.

Bolshaia Sovietskaia Entsiklopedia (1973) [The Big Soviet Encyclopedia]. Moskva: Sovietskaia Entsiklopedia.

Hart, Paul 't; Eric Stern and Bengt Sundelius. (1998) "Crisis Management: An Agenda for Research and Training in Europe." *Cooperation and Conflict*. Vol. 33: 2, 207–224.

Malaia Sovietskaia Entsiklopedia (1931) [The Small Soviet Encyclopedia]. Moskva: OGIZ.

Mozgovaia, Alla V. (1999) Technological Risk and Ecological Constituent of the Quality of Life for the Local Population: Options for Carrying out Sociological Analysis. Moscow: Dialog-MGU.

Porfiriev, Boris (forthcoming) "Instant and Creeping Environmental Crises in Russia." In *From Crises to Contingencies: A Global Perspective* edited by U. Rosenthal, L. Comfort and A. Boin.

Stern, Eric (1999) *Crisis Decisionmaking: A Cognitive-Institutional Approach. (Stockholm Studies in Politics 66)*. Dissertation. Stockholm: Department of Political Science, Stockholm University.

Svedin, L. (forthcoming). Crisis Mitigation and Community Resilience: The Red River Flood of 1997. A CRiSMART working report.

Zakluchenive Expertnoi Komissii_Ministerstva Rossiiskoi Federatsii po Okhrane Okruzhayuschei Sredi i Prirodnim Resoursam po Materialam o Sostoianii Ekolocheskikh Problem i Zdorovia Naseleniya i Proekte Federalnoi Tselevoi Progammi o Pervoocherednikh Mierakh po Vivodu iz Zoni Ekiligicheskogo Bedstviya i Ozdorovleniyu Zhitelei Goroda Karabash. (Odobrreno Prikazon Ministra No 299 ot 25 Iyunia 1996 goda). (1996). (Conclusion of the Expert Commission of the Russian Federation Ministry on Environmental Protection and Natural Resources on "Environmental Problems and the Local Residents' Health" and the "Draft Federal Target Program on the Prioritized Measures Taken Between 1996 and 2000 on Recovering from the Ecological Disaster and on Rehabilitating the Local Residents' Health in Karabash in the Chelyabinsk Region. Approved by an Order from the Minister of Environmental Protection of the Russian Federation # 299, 25 June 1996. Unpublished Materials). Moscow.

Zakon Rossiiskoi Federatsii 'Ob Okhrane Okruzhayuschei Prirodnoi Sredi' ot 1991 goda s Izmeneiyami i Dopolneniyami. (2000) [The 1991 Environmental Protection Act of the Russian Federation as Amended.] Moscow: AST.

Zakon Rossiiskoi Federatsii 'Ob Ekologicheskoi Expertize' ot 1995 godas Izmeneiyami i Dopolneniyami. (1998). [The 1995 Ecological Expertise Act of the Russian Federation as Amended]. No 16. Moscow: Sobraniye Zakonodatelstva Rossiiskoi Federatsii.

The Kursk Submarine Accident:

Ludmila Minaeva and Daniel Nohrstedt

"I am writing blind. It's 13:15. Everyone from section six, seven and eight has moved to section nine. We made that decision because none of us can escape. There are 23 people here." Written by Russian Navy Lt. Capt. Dmitry Kolesnikov, the Commander of Kursk's turbine section (Free Press News Services, 27 October 2000).

Introduction

On August 12, 2000, during some naval exercises in the Barents Sea the Russian nuclear submarine "Kursk" sank a few miles off the northwestern coast of Russia. Official information about the tragedy was released on August 14. There was much uncertainty concerning what had caused the tragedy. Some sources suggested that a missile had blown up inside Kursk while others reported an underwater collision with an US submarine. Ten days after the accident, The Toronto Star (24 August 2000) wrote that this crisis "cost the Russian government the confidence of its people."

Theory and Method

The purpose of this case study is to apply the cognitive-institutional approach to the Kursk submarine accident. The intention is to study the Russian crisis management effort as closely as possible. Previous studies within CRiSMART have pointed to the strengths as well as the weaknesses of the cognitive-institutional approach. By closely studying the individuals that participated in the crisis management efforts, researchers are able to better describe the crisis development. The individuals who made the decisions are identified and interviewed, and hereby provide an authentic view of the decision-

making processes. Sometimes, this is not possible because of security issues and/or a lack of data.

The material used in this case study consists mainly of news media coverage. Therefore the analysis is based on statements made by the key actors and descriptions of the events. This has enabled us to cover several aspects of the Russian crisis management effort while other issues were left uncovered due to empirical shortcomings. The study begins with the course of events followed by an identification of the main decision-making occasions. Thereafter, the crisis episode is studied from five different analytical perspectives. The study is limited to the acute crisis phase which ended with the decision to salvage the submarine.

Several themes are discussed throughout this chapter. Firstly, issues related to the '*leadership*' (i.e. focusing on the crisis from the decision-makers' perspective) are discussed. This theme focuses primarily on how the Russian leadership dealt with the highly negative atmosphere which characterized the aftermath of the accident. The themes '*crisis communication and media relations*' and '*reputation crisis*' look at the crisis from a public relations perspective. Here an overview is given of how the Russian media covered the crisis, how the authorities responded to this coverage, and how this response was perceived by the public and the media. Thirdly, attention is given to that which we call '*the victim's perspective.*' When a large-scale accident occurs, it is imperative that crisis makers have the ability to deal with the victims' relatives; this is absolutely critical in terms of political credibility. Therefore, we have studied how the Russian authorities dealt with this challenge. The fourth theme – '*internationalization*' – looks at the international dimensions of the crisis. It focuses on the political judgments and the difficulties involved with the organization of international crisis management cooperation. The fifth theme, which we call '*from crisis to trauma,*' looks at the larger picture of the crisis. Here we are concerned with the ability to bring closure to a tragic event and the factors which contribute to the development of a national trauma. Finally, attention is given to the issue of '*learning.*' It has often been argued that crises serve as eye-openers for policy makers and that crises usually reinforce the need to make reforms. We thus seek to examine to what extent the Kursk accident has led to or will lead to concrete changes. Some general lessons are drawn about crisis management

in Russia based on the findings from this case study; these are presented in the conclusion.

Chronology of Events

August 12

At 23:30 the Russian submarine SSBN Kursk, fails to respond to radio queries and thus is declared as 'wrecked.' A naval search-and-rescue team is sent out to locate and assist the vessel. No additional information is known about the whereabouts of the vessel ("How it was," 17 May 2001).

Five ships and three other submarines are sent to provide help to the 118 people onboard Kursk. The naval authorities hope that they can lift the submarine up to the surface in the next few hours. No official information about the tragedy is released to the public in the first two days.

Norway and the USA are also in the Barents Sea at the time of the incident and note some unusual activity. A Norwegian seismic research institute and a Norwegian surveillance aircraft (an Orion) report hearing two explosions in the region. Norway later confirms in the national media that it had surveillance ships and one aircraft present in the international waters of the Barents Sea watching the Russian Naval exercises (Idås, 15 August 2000). Furthermore, two American submarines, residing in the Barents Sea at the time, also register the blasts. In addition to these registered explosions, the Russian military also records a third blast fifteen minutes later coming from the area where the Kursk was thought to be located ("How it was," 17 May 2001).

August 13

Russian ships hunt for the missing submarine. Early in the morning, at 4:36, a Russian cruiser spots Kursk on the seabed – 120 meters below. It is impossible to establish direct contact with the Kursk crew. It is clear that there has been some kind of problem with the equipment onboard Kursk, since contact can not be established.

At 7:00 am Russian President Vladimir Putin is informed by the Minister of Defence that Kursk has been found on the bottom of the sea and that attempts to rescue its crew have already been initiated. The first vessel from the Russian Northern Fleet is sent out on a res-

cue mission. It arrives on site at 10:00 am and the first of two failed attempts to reach the wrecked vessel with a mini-submarine is initiated at 18:00. The military staff on the rescue mission hear signs of life inside the stranded submarine; SOS messages are being knocked on the submarine's hull ("How it was," 17 May 2001).

The Russian Navy hopes that they will be able to lower a diving bell down to Kursk and bring the crew up in groups of 15 and 20 from the freezing water. But the first attempt to attach the bell to the submarine fails. An attempt is made to reconnect power and oxygen supplies, but that also fails because of bad weather.

August 14

The Navy publicly announces that an accident involving a Russian submarine has occurred in the Barents Sea. Officials say that surface vessels have radio contact with the submarine and that oxygen and power lines have been linked up to the submarine, and indicate a quick rescue. Navy spokesmen report that Kursk has been crippled by "technical faults" and that the crew deliberately allowed it to glide into the seabed. Other statements surface claiming that the Kursk crew has not reported any deaths onboard. Officials deny that the bow of the submarine is flooded, and asserts that there is no damage to the hull. Navy spokesman Igor Dygalo alleges that rescue workers are in contact with the crew. Officials also declare that the Navy is lowering a diving bell down to Kursk in order to supply the submarine with electric power and oxygen (CNN, 22 August 2000). The Prime Minister establishes a government commission to look into the matter and appoints Deputy Prime Minister Ilya Klebanov to head it. Klebanov immediately goes to Severomorsk and is there August 14 and 15.

In the late evening of August 14 the head of the Navy, Admiral Vladimir Kuroyedov, tells the media that he hopes the emergency teams will be able to bring up the first of the officers and crew before midnight. He says the entire operation could take up to seven hours. The admiral also claims that the submarine's periscope is still up but that the navigation room is damaged, the railing is dented and the protective cover over the two missile tubes on the vessel's right side are missing. Attempts have been made to attach the rescue capsule to the submarine's cargo hatch but difficulties arise because Kursk is leaning at a sharp angle and because of the fierce weather.

"The ships are being blown off their anchors. It is difficult for the ships to hold course. The ships and the capsule have to be directed at a certain angle in order to minimize the strong current. The storms have calmed down somewhat, although the waves are still high. But the current is more crucial" reports a Russian naval spokesman from the Northern Fleet base in Severomorsk.

August 15

The Navy says rescue efforts are underway with underwater capsules. Unconfirmed reports claim that a diving bell crew has reportedly heard SOS messages tapped from inside the vessel indicating survivors. Bad weather forces the Russian rescuers to suspend their operations.

There are speculations that an explosion in a torpedo tube has caused the vessel to flood. The British Royal Navy offers to help, but these offers were not accepted. Environmentalists fear a radiation leak from the nuclear sub. The Northern Fleet steps up its response capacity by sending fifteen more battleships and a few other vessels to the site ("How it was," 17 May 2001).

August 16

Rescue efforts continue. Top officials give contradictory reports on the state of Kursk and the chances of finding survivors. Russia's Deputy Prime Minister states there are no signs of life in the submarine. Attempts to reach the sub are hindered by poor visibility. After initially refusing Western aid, Moscow asks Britain and Norway to send rescue submarine and divers. A rescue team and an LR5 minisubmarine are put upon an airplane at Prestwick Airport. Public criticism grows regarding how the incident is being handled and President Vladimir Putin's decision not to interrupt his vacation in order to deal with the crisis.

President Putin gives the Naval command a go-ahead to seek foreign aid in the rescue mission. The Russian Navy reports that an attempt to dock diving bells on the submarine has failed due to a strong bottom current and the position of the submarine ("How it was," 17 May 2001). Requests for help are directed to Norway and Great Britain (Aftenposten, 16 August 2000).

During an informal meeting with members of the Russian Academy of Sciences, Russian Security Council Secretary Sergei Ivanov

and Deputy Prime Minister Ilya Klebanov brief President Putin on the rescue operation. After the meeting President Putin takes questions from journalists. He makes his first public statement about the dramatic rescue operation. He describes the situation as "critical" for the stranded submarine and the crew trapped inside. Afterwards Sergei Ivanov and President Putin remain in Sochi where they are vacationing and Klebanov returns to the Barents Sea.

August 17

The first session of the governmental committee looking into the causes of the accident takes place. The committee plans to consider the preliminary information about the causes of the tragedy. The government commission declares that Kursk collided with another object despite U.S. and Norwegian reports of two massive explosions in the region at the time the submarine went down. British and Norwegian rescue crews head for Russia by ship.

August 18

The Russian rescue capsule successfully reaches Kursk's escape hatch for the first time, but finds it too badly damaged to dock. The Russian government reports that a huge explosion shook Kursk, but says there is still quite a bit of uncertainty as to what triggered it. President Putin cuts his holiday in Sochi short. Putin blames the bad weather for the failed rescue effort and claims that even if foreign help had been accepted earlier it would not have made a difference because of the weather conditions. Putin confesses that from the very first day he has strong doubts about the possibility of rescuing the crew members and that the chances of finding survivors is "extremely small" (CNN, 22 August 2000). By saying so the President defends his previous decision to remain on vacation and maintains that his presence would only hamper the rescue mission. Putin says, "My first wish was to fly to the region but I decided not to go and allowed the experts to do their jobs."

August 19

Military leaders admit there is no longer any realistic hope of finding the crew alive. Officials acknowledge that the damage to the vessel is massive, and claim that most of the crew died within the

first few minutes. British and Norwegian rescue teams arrive to the site (CNN, 22 August 2000).

August 20

Norwegian divers reach an escape hatch and contradict Russian claims that it is too badly damaged to open. Deputy Minister Ilya Klebanov says a crew member was inside the hatch and that this was what disabled the air-pressure system. Norwegian and British divers say the hatch was empty (CNN, 22 August 2000).

August 21

Norwegian divers say the sub is flooded and that everyone must be dead. The 10-day operation to rescue the crew is called off. The first statements by the Russian officials assert there is no hope of finding survivors inside the submarine. The Chief of Staff for the Russian Northern Fleet, Mikhail Motsak, states that "our worst expectations are confirmed. All sections are totally flooded and not a single crew member is alive" (CNN, 21 August 2000a). Officials say the accident was caused by a collision with a foreign submarine, "probably British." They allege that they have found part of the submarine railing 300 yards away from the stranded sub. The British Ministry of Defense denies this saying that no British submarine was in the area at the time of the incident (CNN, 22 August 2000). Admiral Vyacheslav Popov, Commander of the Russian Northern Fleet, apologizes on Russian television for not being able to save the sailors. "Forgive me. Forgive me because I haven't been able to save your men" (CNN, 21 August 2000c).

August 22

President Putin meets the Kursk Commander's wife, Irina Lyachina, at the base in Murmansk where Kursk started its voyage. He then consoles the other wives and relatives of the crew amid growing fury over the tragedy. He promises to raise the bodies of the sailors and to pay some kind of compensation to the relatives. Minister of Defence (I. Sergeev), the head of the Navy (Admiral Vladimir Kuroyedov), and the commander of Russia's Northern Fleet (Vyacheslav Popov) hand in resignation letters to President Putin. Their resignations are not accepted. Putin states that he is against any military dismissals until the cause of the disaster is determined.

August 23
Relatives of the sailors meet with Ilya Klebanov and Admiral Vladimir Kuroyedov. In an interview on Russian TV President Putin defends his government and indirectly reveals his true allegiances in order of priority, "I will be with the army. I will be with the fleet. I will be with the people."

August 24
President Putin returns to Moscow on August 24 which is announced as the official day of mourning for the Kursk crew.

August 30
The Government foresees that the operation to raise the 18,000 ton wreck will start in September 2001. The Federal Prosecutor's office and the FSB (the domestic intelligence service) take over the investigation of the Kursk accident.

Decision-Making Occasions

The process of identifying the critical problems that faced the decision-makers must, unavoidably, be based on some subjective judgments to some degree according to Stern (1999), Nohrstedt (2000), and Lindgren (forthcoming). As noted, the lack of empirical evidence makes it impossible to provide an authentic view of all of the problems the decision-makers had to cope with during a crisis. The ability to include the most critical issues varies from one case to another.

In this case, it was not possible to get access to official documentation and interviews, which are necessary for providing a realistic and an accurate view of the problems and issues raised during the Kursk crisis. Likewise, it was not possible to make an in-depth examination of the available alternatives and discussions leading up to any one decision. It is possible, however, to point out a number of 'impetuses' facing the responsible decision-makers. These were problems which most certainly raised the necessity of a response and posed the question "What do we do now?" (c.f. Rosenthal et al., 1989). Based on the available sources, we have identified five such occasions. These are listed in Table 1. Also included is information concerning the type of unit(s) which subsequently made each decision.

Table 1: Decision-Making Occasions and Decision-Making Units

Impetus (Decision-Making Problem)	Decision-Making Unit
1. "The Kursk is missing!"	Group
2. "President Putin is informed"	Individual
3. "Accept offers for international assistance?"	Group/individual
4. "Call off the rescue operation?"	Group (experts)
5. "Salvage the wreck or declare it as a sea burial?"	Group

1. The Kursk is missing!

Many crises start with a sudden and unexpected event which often takes even well-prepared decision-makers by surprise. This is precisely how the Kursk crisis started. One can imagine the shock that struck the military leadership as well as the politicians in the Kremlin when the first information about the missing submarine surfaced. Kursk was one of Russian Navy's most advanced weapon systems and it is likely that the accident was unexpected.

The first measure was to send out ships to search for the missing submarine. This was done immediately as soon as contact with the sub was lost. The Navy initiated the rescue operation, and the military alerted the political leadership. President Putin was informed during his vacation in Sochi. It was not only a problem for the military but it was also a problem for the political leadership, and both were expected to respond.

As media reports have indicated, the military leadership controlled the crisis. The first days were dominated by military spokesmen making optimistic statements about the chances of finding survivors. The rescue crew was cited as saying that there were no deaths. Officials denied that the bow of the submarine was flooded, stating there was no damage done to the hull. The political leadership remained somewhat passive, at least outwardly. There were indications that the political leaders were mainly concerned with the prospects of the Russian rescue operation. Was the Russian Navy able to manage the problem or should Russia accept international assistance?

2. Putin is informed

When the accident happened, President Putin was on vacation in Sochi near the Black Sea. When the information reached him, he was faced with a problem that a number of leaders throughout the

world have experienced: should he interrupt his vacation and return to Moscow, or stay in Soch? He decided to do the latter. As the information about the accident reached the media, this decision and the delayed decision to accept international assistance were met with strong criticism.

Afterwards, President Putin said that he might have acted differently if he would be confronted with a similar problem again:

> The only thing which could have been done differently was ... possibly to cancel my meetings, to suspend my vacation ... I could have gone back to Moscow. But again, this would have purely been a PR [public relations] measure, since I'm always in close contact with the military no matter where I am in the world, ... From the PR point of view, that would have looked better. Maybe yes it would have looked better. (CNN, 8 September 2000).

Additionally, Putin believed from the very start that there was a slim chance of saving the submarine crew. He used this argument to defend his low profile. Another argument he used in his defense was that his presence would have hampered the rescue work. "I refrained, and think I did the right thing because the arrival of non-specialists from any field at the disaster area would not have helped the high-ranking officials and more likely would have hampered the work. Everyone should know his place," Putin said in an interview (CNN, 18 August 2000). Afterwards, the media, relatives to the crew, and others criticized Putin for this decision.

Since crises for the most part occur unexpectedly, it is often necessary to spend at least some time and energy in mobilizing a crisis response in terms of calling in the respective decision-makers, opening channels for information management and so on. History has shown that leaders sometimes are not physically present at these critical points in time. Interestingly, when such a situation occurs, leaders often make different judgments. There are examples when they decide to interrupt their current undertakings and join the decision-making group dealing with the problem (c.f. Sundelius et al., 1997). In contrast, other leaders have decided to continue with their other undertakings. As the Kursk accident and a number of other

crises have illustrated, such decisions can be critical in terms of legitimacy and political trust.

3. Accept offers for international assistance?

Fairly quickly after the information about the accident was disclosed, several governments contacted Moscow and offered to help the Russian authorities with the rescue operation. Offers came from the U.S., Great Britain, Norway, and Sweden. At the press conference on August 15, Ilya Klebanov said that Russia could handle the operation on its own. At the same time he expressed his gratitude on behalf of the Russian government to those countries for offering their assistance. Moscow's official request for British assistance came on August 16. The UK Ministry of Defense began deployment early August 16 without knowing whether Moscow would accept its offer for help. This assistance included a British rescue team of 20 people (who were on standby) and a British rescue vessel (an LR5 submarine). However, the rescue vessel could not reach the scene before Saturday, August 19.

In addition to the British mini-submarine, a team of deep-sea divers from Norway arrived on the evening of August 19 to the scene in the Barents Sea where Kursk had gone down. Russian, British and Norwegian experts discussed the diving plans. First, the Norwegians were expected to go down to assess the damage done to the exit hatch. Britain's LR5 mini-submarine was then expected to dock Kursk on Sunday morning.

On August 20 the Norwegian divers reached the escape hatch and contradicted the Russian claims that it was too damaged to open. The next day the Norwegian divers discovered that the submarine was flooded and it was assumed that everyone inside was dead. Rear Admiral Einar Skorgen, heading the 12-person team of Norwegian and British divers, said the rescue operation was going "slowly." He added, "There are a lot of people taking part in the decision-making process and some of them might not have the professional qualifications to understand the consequences of the decisions they think should be made."

The problem of accepting offers for international assistance was, clearly, a decision-making problem of historical proportions. Russian military units had after the end of the Cold War participated in joint military operations within the framework of the PFP, but never

had Western military or civilian operations been carried out in a crisis situation on Russian territory.

Most likely, a number of fundamental values were on the line as the Russian leaders tried to organize the rescue operation. If the politicians would have immediately accepted international help, this could have been interpreted as a sign of disbelief in the Russian military's capabilities. Since Kursk was a technically advanced weapon system, Russian leaders could also have been concerned about granting foreigners access to the area.

Observers have also speculated that the appearance of foreign ships in the area – with incompatible technology and crews speaking different languages – would have been a big nuisance for the Russians. This could simply have been perceived as an obstacle (see CNN, 18 August 2000). Other sources indicate that the Russian leadership believed that accepting foreign assistance earlier would not have made a difference because the harsh weather would have anyway interfered with the rescue operation (CNN, 22 August 2000). The intensity of this value conflict could provide a plausible explanation to the fact that the decision to accept international assistance was dragged out.

4. Call off the rescue operation?

Despite the weather and the difficulty of attaching a capsule to the submarine at a depth of more than 150 meters (500 feet), rescuers were aware of the need to act swiftly. On August 14 the spokesman said that oxygen was running out and the sound of tapping coming from the submarine was getting weaker. "Of course, the oxygen is running low. People just need to lie or sit down," the spokesman said.

On August 16 Russian Navy Deputy Chief, Admiral Alexander Poboi, said there could be enough oxygen inside the Kursk for the crew to survive two to three weeks. But oxygen equipment could have been destroyed or damaged. Deputy Prime Minister Ilya Klebanov (the head of the government commission that reviewed the rescue effort) said, "There have been no sounds for quite a long time" from inside the Kursk. He stressed, however, that it was too early to draw any conclusions about the crew.

Subsequent to this, a military spokesman told CNN that contact had been made earlier with the submarine when the submarine cap-

sule, which was attempting to rescue the sailors inside, had actually come into physical contact with the hull of the submarine. Yet these claims were questionable, since apparently there had not been any physical contact with the submarine hull due to the rough weather conditions.

At the same time the Interfax News Agency quoted the Chief of the Russian Navy, Admiral Vladimir Kuroyedov, as saying that there was sufficient oxygen in the submarine to last until August 25. The day before (August 15) the admiral had said that the oxygen was expected to run out on August 18. Despite the gloomy assessment offered by many experts, the submarine's designer, Igor Baranov, told the Russian Itar-Tass news agency on August 16 that the crew should be able to survive aboard the Kursk for another two days. This raised hopes that a rescue operation could be successfully carried out on August 18 or August 19.

The crisis reached a chilling climax on August 19 when military leaders admitted there was no longer any realistic hope of finding the men alive. In a somber announcement, Mikhail Motsak, told the Russian nation in a special television broadcast, "Our worst fears have come true." He described the tragedy as "the gravest disaster known in the history of the Russian submarine fleet" but said rescue efforts would continue.

On television Motsak described how the men in the front part of the vessel died instantly in the huge explosion that sent the 18,000 ton submarine to the bottom of the Barents Sea. "Most likely, the whole front section was flooded and the crew in those sections died within the first few minutes of the accident," Motsak said. The first victims would have included the captain and almost all of the senior officers. The submarine's control center would have then been completely disabled.

Motsak revealed that the Russian high command had considerably more information about the condition of those sailors who had survived the blast than had been previously thought. Survivors were still hammering messages on the hull of the submarine 48 hours after hitting the ocean floor, he said, and appeared to have been trapped in air pockets in the back of the vessel. Motsak described how the stranded seamen banged desperately in an attempt to warn rescuers that water was leaking in and slowly depriving them of oxygen and increasing the air pressure.

Clearly, this event meets all the criteria of a classical crisis decision-making problem. The lives of the crew were in obvious danger because time was running out, and, as the conflicting statements reveal, there was much uncertainty concerning the possibility that anyone could have survived the accident. This problem is a recurrent one in crisis decision-making. In many large-scale accidents where human lives are at stake, the first and most acute problem is to mobilize all available resources and to organize a rescue operation. Decision-makers eventually reach a point when they are forced to call off the search for survivors. This type of decision requires technical information, expert advice and an accurate assessment of the situation (c.f. Mürk and Rugam, 1999).

5. Salvage the wreck or declare it as a sea burial?

As the acute crisis phase ended, the Russian leadership was faced with another critical decision-making dilemma. Should one attempt to raise the sunken submarine at an enormous cost and give the sailors a proper funeral or should the wreck be declared as a burial at sea? Statements indicate that the Russian authorities in late October thought about canceling the salvaging operation. "If the analysis of the situation inside the submarine shows the presence of too much danger and too high a risk for the divers, I, as Chief Commander of the Navy, will be forced to give the order to cancel the operation," Admiral Vladimir Kuroyedov said in a statement on October 20. The attempts to recover the bodies were halted on November 7, 2000. At this point, a total number of 12 bodies had been pulled from the wreck. The decision to abandon the efforts to recover the remaining bodies was made after the diving crew deemed the risks to be too high. The divers risked puncturing their suits or air tubes if they ventured further (CNN, 7 November 2000). On November 22, the Russian authorities declared that an attempt to salvage the sunken submarine would be initiated during the summer of 2001.

Obviously, an attempt to raise Kursk was an extremely complicated project. It would be costly and technically difficult (see CNN, 16 July 2001). This project was, like the rescue operation, planned to be a joint international operation. Yet, this problem was overshadowed by differing opinions from the experts and the crew's relatives. Experts were concerned that an attempt to raise Kursk from the bottom of the sea could damage the nuclear reactors onboard

eventually resulting in an environmental disaster. Some relatives had the opinion that the crew should remain at the bottom of the sea whereas others strongly disagreed (Dagens Nyheter, 27 October 2000).

The Russian government decided that the Kursk would be brought up from the sea and brought to land in order to bury the dead sailors, to determine what caused the accident, and to salvage the equipment which had not been damaged. This included the nuclear reactor on board the vessel. The reason, for not wanting to leave the submarine where it was, was in part that the nuclear reactor could pose a threat to the ecology since the wreck was in a frequently utilized and fairly intensively trafficked part of the Barents Sea ("Kursk raising operation to be the subject of an online press conference," 25 May 2001).

Similar issues arose in the aftermath of the Estonia ferry catastrophe in 1994 (see Hasper, 1999). When the issue of whether or not to salvage the ferry arose, it was intensively debated among the relatives and politicians. In comparison, the same issue was not as heavily debated in Russia. Such issues shed light on the type of value complexity which confronts crisis decision-makers. Tough decision-making problems do not only occur during the acute phase of a crisis but also in the aftermath.

Analysis

LEADERSHIP

Criticism towards President Putin, other politicians, and the military leadership is probably the most debated dimension of the Kursk accident. Primarily, the Russian leadership was blamed for the slow and uncoordinated response to the accident. Some critics argued that if the leaders had responded more quickly by accepting international assistance, some of the crew members could have been rescued. Additionally, the authorities were severely criticized for not informing the relatives and the public about the latest developments. Once information was announced, it often provided conflicting views of what had happened and the chances of finding somebody alive.

These types of allegations are very common in the trans-crisis stage and especially in the aftermath of crisis situations. Something goes wrong, and the political establishment, the media, and the public search for scapegoats. In these situations, it is very common that top-level decision-makers are the ones that are held responsible. The effects of these so-called 'blame-games' may be disastrous for individual leaders as well as for government organizations. Individuals may lose their jobs and organizations may lose their credibility. These negative events can also erode popular confidence in the state machinery as a whole (see Bovens and Hart, 1996; Bovens et al., 1999).

Studies have shown that the media has become increasingly critical in its coverage of political life. This is not only the case in the West but also a trend which characterizes the newly established democracies in Eastern Europe. In regard to popular support for new democracies, there are indications that people's attitudes towards the regime are volatile and depend heavily upon the regime's performance (Mishler and Rose, 1999). A regime's response to catastrophic events can therefore be very significant. If the response is deemed inadequate or unsuccessful, there could be serious negative consequences for the very foundation of democratic governance. In other words, important democratic values may be on the line during a crisis when the robustness of an institution is put to test. From this perspective, the way(s) leaders cope with criticism can be critical in order to maintain or restore public confidence in the state.

This will not be specifically examined in this chapter. Rather, this chapter focuses on how the Russian leadership dealt with the highly negative atmosphere which characterized the aftermath of the Kursk accident. Previous studies have pointed out a number of tactics leaders, in general, resort to in order to avoid blame.

But first, it is interesting to see that President Putin's actions had considerable symbolic value. In crises, the political order and stability is put on the line. To deal with the challenge of keeping faith in the robustness of the state, it is absolutely critical that leaders and other state representatives are able to communicate with the general public. This can be done in a number of ways. Above all, it has been argued that it is especially important to be active – verbally and physically (Hart, 1993).

Putin's decision to continue his vacation during the first few days after the incident proved to have a significant impact on the management of the crisis. Due to empirical shortcomings, one can only speculate Putin's thoughts at that time. With some certainty, however, it seems reasonable to assume that Putin misjudged the power of the Russian media and also possibly the severity of the situation. This is a good example of the types of problems facing transitional countries. Today in Russia there are still many institutions holding on to the old Soviet heritage. These institutions have not been typically affected by outside forces, but now the increasingly westernized public has more influence. Several observers have compared Putin's actions with Gorbachev's response to the Chernobyl disaster in 1986. In the Chernobyl case, Gorbachev waited 18 days before commenting upon the disaster (The Russia Journal, 19 August 2000; CNN, 18 August 2000).

Putin perhaps realized that his presence at the scene of the accident or in the Kremlin during the first few days of the catastrophe would not have helped facilitate the rescue operation. In fact, he argued that he thought he would have hampered the rescue work (CNN, 18 August 2000). What he most certainly misjudged was the symbolic value of taking a more active role in the initial stage of the crisis. Long after the catastrophe, Putin admitted this was a mistake and based on current observations it appears as if he has probably learned from it (see CNN, 8 September 2000). However, at the time when criticism and basically the whole state apparatus (including the military and the political establishment) were intensively against him, he resorted to a more defensive strategy.

Research has shown that leaders have a whole repertoire of responses to fall back upon in a situation where they are put under negative pressure. These include rhetorical as well as behavioral actions. Non-argumentative tactics involve remaining silent and avoiding answering critical questions. It has been proposed that "in a fully developed liberal democracy, with attentive news media and active political representatives, policy makers will sooner or later have to resort to tactics of a rather argumentative nature and defend themselves" (Bovens et al., 1998:128). The findings from the Kursk case suggest that this observation is also valid in fairly new established and developing democracies. As the criticism grew, Putin and his colleagues were forced to use an argumentative response.

These tactics could be placed on a continuum with arguments denying the negative event on one side and public excuses on the other. After being silent during the first couple of days, President Putin and other members of the Russian leadership made use of a number of such tactics. Particularly, the pattern Bovens et al. call 'repentance' is prominent. This includes making public excuses and promising financial compensation for damages.

- Popov, the Commander of the Russian Northern Fleet, apologized on Russian television for "not saving the sailors" (CNN, 21 August 2000).
- Putin's own adviser acknowledged that the President should have taken a different course of action and the adviser took full responsibility for this 'mistake' (CNN, 24 August 2000).
- Putin himself took full responsibility for the accident in arguing that "I am responsible for it and feel guilty for this tragedy" (Detroit Free Press, 24 August 2000).
- The Government decided that the military should financially look after the families by providing them with compensation worth US $7000 – roughly an average 10 year income (CNN, 23 August 2000).

It is also common in failed crisis management that a few of the key actors offer to resign. This strategy is often utilized during crises, yet these resignation letters are almost always refuted as evident in a few Estonian case studies (see Stern and Nohrstedt, 1999). The same thing happened in the aftermath of the Kursk tragedy when three senior officials – Defense Minister Igor Sergeyev, Navy Chief Vladimir Kuroyedov and the Commander of the Russian Northern Fleet Vyacheslav Popov – offered to resign. Putin, however, refused to accept their resignations.

CRISIS COMMUNICATION AND MEDIA RELATIONS

Previous research has shown that one of the most difficult tasks crisis decision-makers have to cope with is to coordinate the flow of information. Even though the flow of information dramatically increases during a crisis, there are also examples where information is almost totally missing. Due to these difficulties, it is often problem-

atic to make well-educated, thoughtful decisions. In these situations, the element of uncertainty is clearly evident.

But the aspect of information management is not only about decision-makers' access to information. This theme also encompasses how decision-makers communicate with each other, the media, the wider public and other audiences. Many studies indicate that the ability to successfully resolve a crisis situation very much depends upon how the problem is formulated and communicated to the social and political environment. Legitimacy and political support very much hinge upon the ability to control the external flow of information. From this perspective, the news media is a key actor.

Previous studies on crisis management in Eastern European countries provide conflicting evidence on the behavior of the news media and its impact on crisis management efforts. In some countries (e.g. Estonia) the news media has evolved into a powerful watchdog that appears to be very aggressive during a crisis. Several cases from the Estonian context reveal that political and bureaucratic conflicts often are fueled by intensive and critical mass media coverage (Stern and Nohrstedt, 1999). In contrast, experiences from other countries in the region (e.g. Latvia) show that the news media has had less of an impact on crisis development. Cases from Latvia indicate that prevailing ethic tensions seem to be the most conspicuous driving force (Stern and Hansén, 2000). It is widely known that the media was a powerful actor during the Kursk accident. This analysis takes a closer look into how this role was played and how it affected the development of the crisis.

The Kursk tragedy received substantial global media coverage. However, journalists were not given access to the area near the accident; the only exception being the state television channel RTR. All of the other television channels were deprived of the opportunity to follow the rescue operation directly at the scene. According to the newspaper *Izvestia*, this was a direct order from President Putin.

Newspapers owned by the powerful media tycoons Boris Berezovsky and Vladimir Gusinsky portrayed the Kremlin as guilty for the confused and feeble rescue operation. "If the crew of the Kursk is not saved, the reputation of the Russian government will be lost beyond hope" was a headline in the Berezovsky-owned newspaper *Nezavisimaya Gazeta*. The daily newspaper *Moskovsky Komsomolets*, which supported Moscow Mayor Yury Luzhkov, published a

front-page photo of Putin in a naval uniform; a snide reminder that the President had spent a night on an atomic submarine in April 1999 and praised the submarine fleet saying it was Russia's future military stronghold. The newspaper *Izvestia*_ran a front-page picture with the crew of the Kursk under the headline: "The Price of National Pride — Human Lives."

The television company TV 6, controlled by Berezovsky, aired a special program devoted to the Kursk tragedy on August 16–17. The program was live and TV viewers were encouraged to discuss their opinions on the authorities' ability to save the submarine crew. Yegor Tomko, the sixty-five year old former commander of the atomic submarine unit, said the only reason for the tragedy was an explosion in the front compartment of the submarine. He also said, "only one third of the crew could possibly still be alive – those people who were in the back part of the submarine."

Other viewers had different opinions. Ninety-eight percent of the St. Petersburg television audience criticized the Government for not accepting technical help from foreign states earlier; four days had been lost because of the delayed decision. "It is necessary to use all possible means to save the crew" was a widely accepted notion. Sixty-four percent of the audience was sure the Navy leadership was not revealing the real reasons for the tragedy and had deceived the public by using the mass media to conceal their own responsibility for the accident. "They only think about the stripes on their shoulder." Forty-four percent of the audience looked negatively upon the fact that Klebanov was absent the first few days. "He and Putin should not be relaxing in Sochi, but should be directing the admirals."

These observations about the Russian media coverage of the incident are quite similar to previous studies about crisis management in the Baltic States. Drawing upon case studies about crises in Estonia and Latvia, Stern and Hansén (2001: 349) conclude that:

> Whereas old guard politicians in state socialist countries could count on a docile and supportive media, public servants in the new democracies are increasingly confronted with an aggressive, commercially oriented and critical media, which takes its 'watchdog' role very seriously. Strategies (such as 'cover ups' of mistakes) which might have been extremely effective under the old system have

> the potential to backfire dramatically if journalists manage to get wind of the embarrassing information anyway.

This observation seems very valid in light of the Kursk accident. Newspapers and televised media had an important role to play for public opinion, as demonstrated by the audience surveys. Also, one can see that the media formed its own opinion concerning the success or failure of the authorities' efforts (see for example The Russia Journal, 19 August 2000). Given the limited amount of official documentation and eye-witness reports from those individuals who participated in the Russian crisis response to the Kursk accident, we cannot do anything but speculate about the strategies the Russian authorities had when confronting the national and international media.

Based on statements made by different state officials concerning the lack of coordination and the lack of information about the Kursk incident, one could conclude with some certainty that the Russian authorities were relatively unprepared for the dramatic media coverage surrounding the event. Possibly, they underestimated the power of the new media. The question is, then, whether the Russian leaders and authorities have learned anything from the Kursk accident in retrospect.

In Sweden, for example, there is a growing trend that policy makers engage in 'media training' programs. That is, they work closely with journalists in order to prepare for future media storms. Since the role of the news media in transitional states clearly follow the western trend, it remains to be seen if policy makers realize the need for being better prepared to meet a critical media in the future. Hopefully, the Kursk accident serves as an eye-opener.

THE VICTIMS' PERSPECTIVE: COMMUNICATING WITH THE RELATIVES

One aspect that has not received much attention in the study of crisis management is what one could call 'the victims' perspective.' Many problems that decision-makers face in times of a crisis are material in nature. They may be faced with the challenge of quickly mobilizing resources, to find ad hoc solutions to problems that had previously been overlooked, or forced to make sacrifices in terms of

money and political prestige. But they also have to communicate and take care of the victims and their relatives who have been affected directly by the disaster or accident. This challenge has shown to be absolutely critical in terms of credibility. Since the media will focus a great deal of their coverage on interviews with relatives and victims, the way authorities confront them will be important (Hart, 1993). It is important that they show sympathy and human compassion as well as understand the political symbolism of the event.

The Kursk tragedy was no exception in this respect. Since the news media did not have access to any concrete information about the accident during the first couple of days, they focused most of their attention on the relatives. Since the relatives were given sparse and sometimes conflicting information about the accident and the prospects of saving the crew, the media coverage was rather critical (see Charlton, 23 August 2000). The media criticized the authorities for not showing enough concern.

The anxiety of the families with loved ones serving in the Northern Fleet was intense because none of them had been told exactly who was onboard the ship. "It is really agonizing for the families to have to wait like this," said one of the relatives. "Submarines have rotating shifts, so there could be potentially hundreds of sailors on the Kursk. But neither the families of those [crew members] actually onboard, nor the families of those conceivably onboard are being told the truth."

Ludmila Milyutina, whose son Andrei was aboard the Kursk, said that when she called a government hot line for information on the disaster, she was told, "Go to Murmansk and ask the journalists." The wife of the Kursk Commander said that she was waiting patiently, but anxiously, for news about her husband. "People talk a lot but I told myself that I shall only listen to what is officially reported." Galina Belayeva, who was less patient, went to Murmansk before heading to Kursk's home base in Vedyayevo. "What can I know apart from that my husband is dying there," she told reporters trying to hold back her tears. "Let them save my husband, the father of my children."

On August 18 the list of those actually onboard Kursk at the time of the accident was released. This list was not made public by the Russian Navy, rather by the Moscow newspaper *Komsomolskaja Pravda*. The newspaper said that it had obtained the list by bribing a top Russian Navy official with about $650.

Many of the wives and parents of the Kursk sailors had come to Murmansk looking for information and hoping for some kind of rescue. On August 18 several of the families were given the chance to talk with officials about the catastrophe for the first time. A meeting between the government commission and the relatives of the crew members was organized, but it quickly became heated. Some of the wives were yelling, and some were even swearing. They were demanding to know why the Russian officials had waited so long before asking for outside help.

At a meeting with President Putin on August 22, some of the relatives requested that the planned memorial be cancelled. Their reason being that they refused to mourn their loved ones until their bodies had been retrieved from the wreck. Nevertheless, about 150 of the 550 relatives gathered at the Kursk's home base in Vidyaevo, sailed out to the site of the wreck in the Barents Sea, and threw wreaths and flowers into the water.

The Russian authorities' inability to properly deal with the relatives can partially be explained by the Soviet legacy which still heavily influences many aspects of the Russian state. As noted above, it seems like the military basically controlled how the problem was perceived; that is they largely framed the problem. An indication of this was the relatively slow political reaction. The wars in Chechnya have illustrated that the Russian military is restrictive with sharing information with relatives. The experiences from Chechnya and the Kursk tragedy suggest that the military lacks the appropriate channels for adequately communicating with victims' relatives. Or at least there has been a big gap between the information the authorities have actually shared, and the type and amount of information that the relatives have expected and demanded.

INTERNATIONALIZATION

Often crisis management at the national level contains international aspects. In the case of socio-political conflict, it is common that states, especially small ones, turn to international actors for support. The lack of information and operative skills can trigger attempts to rally international support. As previous crisis experiences have shown, this can include anything from information sharing to

cooperation between operative units. In a globalized world, such initiatives can be expected to be more commonplace in the future.

The Kursk accident was from the very beginning a crisis with international implications. As soon as the information about the accident reached the news media, the CNN syndrome appeared and news was cabled all across the world. Presumably, this put additional pressure on the Russian military and political leadership which was already unable to organize a coordinated information management apparatus during the first few days of the crisis. This is demonstrated by the fact that many statements contradicted each other.

Yet, there were also other international elements during the Kursk crisis. International players were involved at two points in the crisis. First, they played a critical role in the first phase of the crisis when the rescue operation was being organized. Second, international actors were also involved in planning the salvaging operation.

The international involvement during the first phase can be seen as part of a wider trend characterizing crisis management in a global world. When large-scale traumatic events occur, other states are relatively quick to demonstrate their solidarity. These reactions range from public statements made by political leaders to direct participation in the acute crisis response. The decision to accept foreign aid of different kinds is, however, a difficult one. Policy makers must be convinced that the nation's resources are insufficient and that foreign assistance would increase the possibilities of responding more effectively. This situation could potentially evolve into a difficult value conflict. On the one hand, policy makers may realize that the national crisis management organizations are very eager to deal with the situation on their own. On the other hand, there may be actors that demand the mobilization of all possible resources. Additionally, there may be great uncertainty concerning the costs and the chances of success with both alternatives. Naturally, such a dilemma is highly stressful for those individuals who must quickly decide the best alternative.

Seemingly, this was the kind of situation President Putin and his advisors faced during the Kursk crisis. An analysis of the statements made by the Russian military officials indicates that they very much believed that a successful rescue operation could be conducted within just a couple of days. Simultaneously, the public's demands to ac-

cept international assistance grew stronger every day. In this situation, Putin seemed to have had great confidence in the Russian military and its capabilities.

International actors were also prominent in the second phase of the disaster during the organization of the salvaging operation. An assessment was made that it was not possible to bring the Kursk to shore so the Russian government looked for an international partner or contractor which could help salvage the wreck (Tsvetkova, 18 June 2001).

There are few companies or agencies in the world that have the capacity to do this kind of complex and technically advanced operation. Halliburton Norge A/S (based in Norway) was the first company which the Russian representatives started negotiating with (Nummerlin, 2 July 2001). This was the same deep-sea diving company that had sent several Norwegian divers to Russia after news of the accident and who had opened the hatch on the Kursk during the rescue operation. The Russian representatives decided not to sign a contract with Halliburton after the initial negotiations and preparatory work. Instead they decided to sign a contract with the Dutch company Mammoet-Smit International. Some of the Russian journalists were critical and suggested that the break with Halliburton was a result of the fact that the Russians found out that the company was American-owned; whereas the Russian representatives argued that the timeline presented by Halliburton did not suit them. The Dutch company had promised a more satisfactory time schedule for salvaging the wreck according to the Russian authorities ("Kursk raising operation to be the subject of an online press conference," 25 May 2001).

The Norwegian government had a strong interest in assessing the ecological damage, in checking the radiation level and in seeing to that the Russians removed the nuclear material from the sea in a safe manner (Ivanov, 7 August 2001). The Norwegian government requested to participate in salvaging the wreck and also expressed a desire to be there monitoring the radiation levels in the water and air during the actual towing and lifting of the wreck (Ivanov, 7 August 2001). This request came after the Norwegian Radiation Protection Agency which expressed concerns that radiation could leak during the proposed lifting and towing of the wreck. The Norwegian Crisis Council on Nuclear Accidents had developed the Norwe-

gian preparedness plan for the scheduled salvaging of the Kursk (Nummelin, 2 July 2001).

The Russians declined the Norwegians' request for direct participation in the lifting and towing procedure and referred them to the Dutch company (which was in charge of the operation) for permission to measure any possible radiation. The General Designer of the Rubin Marine Engineering Bureau, the Norwegian Consul to Russia, a representative of the Russian Defense Ministry, and the Russian Atomic Supervisor had a meeting where it was reaffirmed that the Norwegians wanted to participate in the salvaging operation and to measure the radiation levels with their own instruments. The Russians argued that not all countries, which had an interest in the operation, would be allowed on site. They proposed that the Norwegians reach an agreement with the Dutch company on whether or not they could set up measuring equipment at the site. The Dutch company was the only foreign participant that the Russians allowed on site, but the Russians were not opposed to the Norwegians negotiating a separate deal with the Dutch company about participating in the operation (Ivanov, 7 August 2001).

After a meeting between Norwegian and Russian representatives in Murmansk (the designated harbor for the Kursk investigation), the Russians agreed to allow the Norwegian state officials to be present in the Barents Sea to witness the salvaging of the Kursk and to record radiation levels during the operation. Further negotiations and planning were made between chemical and radiation specialists from the Russian Navy and Norwegian diplomats. The Norwegian specialists were to operate from one of the Russian Northern Fleet ships. At the time of the agreement the Norwegian Consul-General welcomed the opportunity to monitor events both before and after the lift. He asserted that the Norwegians deemed the risk of environmental pollution to be small, but that the area was of special economic importance to Norway and that the Norwegian public needed to be reassured that it was not being threatened by an environmental disaster ("Norwegian experts set for site radiation checks," 19 September 2001).

There is evidence that international crisis management cooperation may not always unfold smoothly. The organization of the international Kursk rescue operation did not unfold without complications. Primarily, there seems to have been some disagreements be-

tween the Russian units operating at the scene and the Norwegian and British rescue teams. When the Norwegian and the British teams arrived at the scene, a number of problems arose. Mr. Nøss (a member of the Norwegian company operating the mini submarine) claimed that, "When we got to the area, I think it was around 1800 CET on Saturday. We had to wait until 0600 CET on Sunday until we got clearance from the Russian officials" (CNN, 21 August 2000). Other reports indicate that there were information management problems which rendered the work difficult. For example, the Norwegians argued there was so much incorrect data that they felt it threatened the safety of the divers.

Other information also suggests that the operation was complicated by the lack of leadership. A British official on site reported that negotiations with the Russians had been extremely slow. Also, he pointed to some tension between the British and the Russian teams regarding the Russian leadership.

Again, one can only speculate the reasons for these problems. It appears as if the Russian actors at the scene were not sufficiently prepared to take care of the Norwegian and British units as they arrived. This could be supported by the fact that the Norwegians could not initiate their work immediately upon arrival to the area. Hypothetically, the information channels between the Russian actors working at the scene and the Russian military and/or Russian political leadership did not work properly. Perhaps the Russian operational units did not have clear orders from above about the organization of the joint rescue operation.

Observers in the field of crisis management have stressed the role of 'interoperability,' which mainly concerns the ability to organize effective operations between military and civilian authorities (Lundgren, 1998). The findings from the Kursk response suggest that the essence of interoperability should be considered in a wider perspective. In order to be able to respond effectively to large-scale crises, governments must be able to quickly organize joint international efforts. As evident in the Kursk case, this is often problematic in many regards. Political barriers, problems of language and technical difficulties must be removed before a large-scale operation can be organized and successfully implemented. Thus, interoperability requires civilian-military cooperation in an international context.

FROM CRISIS TO TRAUMA

In the literature on crisis management it has been argued that the ability to reduce the amount of uncertainty related to the causes of a disastrous event is absolutely critical in order to reduce the long-term emotional impact of that event. Here uncertainty does not mean the amount of information needed to make accurate decisions during the acute phase of a crisis; instead, it is important to find the elements leading up to the event which subsequently evolves into a crisis (see Stern and Hansén, 2000). A review of the media coverage reveals that there are a great number of theories which flourish in the press during the first few days following an incident (see for example CNN, 21 August 2000d; CNN, 29 August 2000; CNN, 9 September 2000; CNN, 9 November 2000; CNN, 21 November 2000).

At the August 15th press conference, Ilya Klebanov said that external examinations of the hull of Kursk had revealed "a very strange picture" of its damages. The Deputy Prime Minister told the press, "All versions of the accident's causes are possible. There is a probability – and this is only one of the possible versions – that the submarine might have run into a World War II mine." At the same time, all other possible causes were also being considered.

Klebanov said that the accident occurred when the submarine was performing some exercises. He added, "But so far we cannot say anything for certain about the causes of the accident." The Kursk nuclear submarine was one of the latest submarines obtained by the Russian Navy. Klebanov emphasized that there must have been "very serious reasons" for such an accident to take place. "Generally speaking, the situation is unusual," he added. Media reports in Moscow claimed that Kursk could have been involved in a collision with another nation's submarine, possibly an American vessel which may have been in hiding in the deep Norwegian fjords. The United States admitted that two of its submarines had been in the area at the time of the incident on Saturday, although the U.S. insisted that they had not been involved in the Kursk accident. Norway also insisted that none of its submarines had been involved in the incident.

The U.S. submarines monitoring the Russian Navy exercises noted two explosions when the Kursk went down. The second explosion was much larger than the first, according to U.S. officials. The Russian Navy refused to confirm the reports from the U.S. offi-

cials about the two explosions. Russian officers did say, however, that a single explosion in the torpedo compartment at the front of the submarine apparently caused Kursk to sink.

In his first public statement after the incident, the Commander of Russia's Northern Fleet (Vyacheslav Popov) said Kursk had been crippled by an explosion inside one of the submarine's compartments, which could have been triggered by a collision with an unspecified object.

On August 17 a state television correspondent reported "very serious damage" to the front section of Kursk after viewing video footage taken by someone in the deep-sea rescue capsule. The Russian Navy said the film of the sunken sub suggested an explosion hit Kursk and the vessel appeared to be sinking further into the mud. Ilya Klebanov said there was a "terrifying hole" on the starboard side of the submarine. He added that experts reviewing days of rescue efforts to save Kursk believed the submarine had hit "a huge, heavy object."

"A rather big part of the crew was in the part of the boat that was hit by the catastrophe which developed at lightning speed." The footage showed enormous damage to the front half of the submarine that would have sent the vessel to the bottom in seconds, Navy officials said. The control room, where most of the crewmen would have been working, was below the conning tower; thus, most likely many of the sailors would not have had time to escape when the submarine went down.

At the press conference on August 19, the Chief of the Northern Fleet general staff, Vice Admiral Mikhail Motsak, met with the media and for the first time gave details of what may have caused the accident. The first theory, he said, was that there had been some kind of collision. "It is very possible that the cause of the accident was a strong dynamic blow which could have been caused by several factors." The second theory speculated massive flooding followed by an explosion in one of the submarine's front compartments. The third theory – and the one that Motsak said he most strongly believed – involved a mine from World War II. Motsak's broadcast revealed that the Russian Navy had discovered six such mines in the last seven years. "I cannot exclude this option," he said, "particularly because the initial explosion (on the submarine) was caused by only 100kg of explosives, and the submarine does not have such

small warheads on its torpedoes. During the accident, at least three or four of the submarine's torpedoes exploded with the force of one or two tons of TNT, which flooded the entire bow (front) section and instantly killed half of the crew."

In sum, since the first day of the tragedy a large number of theories have flourished in the news media. Official representatives have made several contradictory statements concerning the causes of the disaster. This and the great uncertainty around the causes led to a national trauma. The successful salvaging operation could, eventually, prevent this from happening. Recent information from the investigation also provides conflicting evidence. Clues indicate that most likely a missile from inside the submarine triggered an explosion which killed the crew. On the other hand "skeptics say, however, that if any clue could be found, it would be located in the submarine's mangled first compartment, which was left behind when the Kursk was raised." (The Moscow Times, 26 October 2001). It remains to be seen, then, if further analysis succeeds to establish what actually caused the accident.

LEARNING

Crises frequently serve as eye-openers for policy makers and highlight the need for change. They provide "windows of opportunity" for administrative and political leaders to carry out institutional and policy changes (Kingdon, 1984; Keeler, 1993). But crises also frequently produce changes in cognitive schemes. Policy makers may get a completely new understanding of problems as well as new solutions to these problems (Sundelius et al., 1997; Stern, 1997).

In established democracies, these processes usually take some time before they can be implemented. The innovation, development and implementation of new rules, routines, laws and organizational structures must pass through a number of filters before they become reality. Consequently, it may take some time before the first traces of crisis-induced reforms emerge. In contrast to this pattern, it has been proposed that transitional societies have a tendency of hyper-learning and institutional volatility. That is, political elites and administrative leaders may fairly rapidly decide on extensive reforms. The empirical findings are, however, dubious. Some transitional countries (for example Estonia) have quickly implemented reforms

in the wake of crises while other countries (such as Poland, Latvia and Russia) have been dawdling (see Stern and Nohrstedt, 1999; Stern and Hansén, 2000; Stern and Bynander, forthcoming; Faleev, Akimov and Porfiriev, this volume).

It has been proposed that negative feedback will increase the likelihood of extensive crisis-induced change (Baumgartner and Jones, 1993). As the previous parts of the analysis have shown, the public's reactions to the Russian authorities' response to the Kursk accident were highly critical. One could thus, on theoretical grounds, expect that this would facilitate substantial reform-initiatives on behalf of the Russian leadership.

In the wake of the Kursk tragedy, we have seen a number of indications that several leading actors have pushed for reform. Just days after the accident, several Russian military spokesmen pointed out the need to reform the Russian Armed Forces. Putin – the Russian Armed Forces Commander in Chief – had talks with Russian officials about a reform program for the Armed Forces. Even though many details remain, a decision was said to have been made by Putin himself in favor of the implementation of the program (CNN, 12 August 2000). In addition, the replacement of the 63 year-old Defense Minister (Igor Sergev) with the much younger Sergir Ivonov (the former Security Council Secretary responsible for the development of the Russian Armed Forces Reform) is also a clear sign that the old Soviet apparatus is slowing being replaced.

Another example is that the Duma voted in favor of a draft that would expand the military's budget in September 2000. The draft was revised to expand the military's budget from 146 billion rubles to 206 billion rubles. Other efforts have been made to increase the military's budget as well. The Defence Ministry and leading Duma factions demanded a military budget consisting of 3.5 percent of the GDP, which would bring the military budget up to 270 billion rubles. Also, shortly after returning from his visit to Severomorsk in late August, Putin met with the Minister of Finance (Alexei Kudrin) to see if more money could be allocated to the Armed Forces (The Russia Journal, 2 September 2000).

Additionally, these are changes in individual cognitive schemata. An observation in point is President Putin's personal experience from the PR fiasco. As noted above, he claimed afterwards that he probably would have acted differently if faced with the same chal-

lenge again (see decision-making occasion no. 2). The statements he has made clearly indicate that he personally learned from this crisis experience. He plausibly realized what role the media in modern Russia plays in escalating a tragic accident into a political credibility crisis. The experiences from Kursk may possibly influence him to act sooner and more decisively the next time a similar crisis occurs. His response to the tragic events of September 11, 2001, in the USA serve as a vivid example.

The question, of course, is if these and other changes will warrant a more effective crisis response in Russia and elsewhere. Clearly, this will depend upon a number of factors. The Kursk case illustrates that future Russian crisis managers must be able to cope with unexpected and technically complex problems. The ability to respond swiftly and effectively to such challenges necessitates an arsenal of expertise, knowledge, and resources. There are some indications that steps have been taken to strengthen these capabilities. For example, the increase in subsidies to the military could be one decision. This could result in the development of certain technical equipment which was lacking at the time of the Kursk accident. Yet, there are various barriers in the way as well. Strategic plans have to pass through a long chain before they can be fully implemented. And still, it is not certain that these improvements will be enough to meet future crises which are never repetitions of the past.

Conclusions

When the submarine Kursk sank to the bottom of the Barents Sea on August 12, 2000, it marked the beginning of what can be characterized as one of the most serious crises that modern Russian has ever experienced. The accident put modern Russian institutions to an acute test. What is probably the most striking experience from the accident is how the disaster quickly spilled into the various sectors of Russian society. It started as a military operation but quickly evolved into a political challenge. Kursk was one of the most modern nuclear weapon systems that the Russian fleet had at its command and the accident was certainly, at least initially, experienced as a major blow to the Russian military. A technically advanced weapon had been destroyed and the personnel operating it had been killed. After a large-scale accident, the first few days are usually fo-

cused on saving lives. The Russian authorities failed with their public relations policy, and the rescue operation quickly escalated into a political legitimacy problem. The accident developed into a full-blown political credibility crisis.

This case study includes an in-depth investigation of the accident from a crisis management perspective. It was analyzed in a broad manner in order to increase the understanding of the complexities involved in large-scale crises like the Kursk accident. The aim behind this was to bridge the gap between theory and practice. Experiences from historical crises can help prepare future crisis decision-makers for future challenges. A few important lessons can be drawn from the Kursk tragedy.

The first finding concerns the dynamics of crisis development. The crisis was first primarily considered a military problem. The media coverage of the accident had an aggressive negative tone to it, and the problem quickly shifted to the Russian political leadership. The leaders were blamed for not acting decisively and they had to spend much time and energy on assessing the damage. Our analysis suggests that this escalation was enabled by three interrelated factors. First, the military and the political authorities did not show enough sympathy or respect to the relatives. The authorities did not share much information with the news media, and thus the media focused much attention on this. Second, the media was very negative throughout the crisis. They played a critical role in the events which evolved around the Russian attempts to rescue the crew. Thirdly, there are indications that the authorities were not sufficiently prepared – neither strategically (politically) nor operatively – to cope with the crisis. They lacked the necessary equipment to carry out a successful rescue operation and also the political preparedness to anticipate the criticism which characterized the public debate.

Another finding in this case study confirms how the shadows of the past can influence crisis management. Many of our observations suggest – in line with previous studies on crisis management in transitional societies – that the political and administrative heritage, to some degree, influenced the way the crisis was handled. It has been proposed that the need to make quick and authoritative decisions and to exercise strong leadership often compete with democratic values such as openness, transparency and participation in the polit-

ical process (c.f. Stern and Hansén, 2000). Findings from this study on the Kursk disaster seem to suggest that these needs also could be seen as interrelated rather than competing forces. It seems like public demands for openness preceded state action on several occasions. This was particularly evident in the process that led to the acceptance of international assistance.

When we speak about the shadows of the past, we also have in mind the organizational/administrative culture which influences the crisis response. Some of the actions and behavior observed during this crisis could, hypothetically, be explained by factors inherent in tenacious organizational and administrative cultures. We noted, for example, that the authorities showed limited experience in their ability to take proper care of the victims' relatives. This could be explained by the lack of routine and/or preparedness to meet these types of challenges. It is not the lack of experience (i.e., catastrophes involving a large number of victims) but rather the lack of a special culture and a clear policy. Another example is President Putin's late appearance in the crisis. Gorbachev was also late in getting involved with the 1986 Chernobyl crisis. These findings support previous propositions that "the shadows of authoritarianism" influence crisis decision-making in contemporary Russia as a transitional state.

Our final concluding observation concerns the international dimension of the crisis. International audiences and actors affected, yet in different ways, the development and the management of the crisis. It is interesting to see, for example, how the U.S. played two conflicting roles in the crisis. First, the U.S. was one of the countries which fairly quickly offered to assist the Russian authorities with the rescue operation. Also, the US provided Russia with various types of intelligence. But also, the US played the role of a scapegoat. The possibility that Kursk had collided with an American submarine was from the very onset a plausible theory that some Russian officials supported officially.

Putin's decision to accept British and Norwegian assistance was a remarkable step if looked at in a wider historical perspective. Most likely, this was a very difficult decision to make, perhaps no less difficult than to join the USA in the international anti-terrorist coalition after the tragic September 11th events. Based on the fact that the military initiated a large-scale rescue operation without having the necessary equipment, it seems as if this operation was a

matter of pride for the military leadership. In contrast to this, the media quickly started to question why the authorities had not accepted international assistance. Putin thus had to navigate between a profile-seeking military and a critical public which supported the immediate involvement of foreign experts. The intensity of the conflict between these two positions could be a plausible explanation as to why the decision process dragged on. Yet, we also observed that the joint rescue operation was overshadowed by several problems – technically and linguistically. Today, Russia frequently engages in joint international exercises and such efforts would hopefully contribute to overcome such problems in the future.

References

Aftenposten (15 August 2000) "Russland spør hva NATO kan bidra med" [Russia finds out what NATO can help with]. Information accessed 28 October 2001 at: http://tux1.aftenposten.no/nyheter/iriks/ d156277. htm

Aftenposten (16 August 2000) "Russland ber Norge og Storbritannia om hjelp" [Russia begs Norway and Great Britain for help] Information accessed 28 October 2001 at: http://tux1.aftenposten.no/nyheter/iriks/ d156477.htm

Baumgartner, Frank and Bryan Jones (1993) *Agendas and Instability in American Politics*. Chicago: University of Chicago Press.

BBC (3 October 2001) "Kursk recovery hangs in balance" Information accessed 5 October 2001 at: http://news.bbc.co.uk/hi/english/world/europe/newsid_1577000/1577849.stm

BBC (5 October 2001) "Kursk salvage team resumes work" Information accessed 5 October 2001 at: http://news.bbc.co.uk/hi/english/world/europe/newsid_1580000/1580321.stm

Bovens, Mark (1998) *Quest for Responsibility: Accountability and Citizenship in Complex Organisations*. Cambridge : Cambridge University Press.

Bovens, M. and Paul 't Hart (1996) *Understanding Policy Fiascoes*. London: Transaction Publishers.

Bovens, M.; P. 't Hart; S. Dekker; and G. Verheuvel (1999) "The Politics of Blame Avoidance." In *When Things Go Wrong: Organizational Failures and Breakdowns,* edited by H. K. Anheier. London: SAGE.

Charlton, Angela (23 August 2000) "As Russia mourns sunken Kursk's crew, public anger turns to Moscow." The Associated Press in the interactive edition of the Pittsburgh Post-Gazette. www.post-gazette.com

CNN (12 August 2000) "Putin to shake-up Russian military."

CNN (18 August 2000a) "Submarine disaster deals setback to Putin."
CNN (18 August 2000b) "Submarine drama: A no-win proposition for Putin?"
CNN (21 August 2000a) "Russia asks Britain to send mini-sub down to Kursk."
CNN (21 August 2000b) "No survivors found on Russian sub: Rescue called off."
CNN (21 August 2000c) "Kursk tragedy: Admiral asks for forgiveness."
CNN (21 August 2000d) "Disaster theories focus on torpedoes."
CNN (22 August 2000) "Russia asks Norway to help retrieve bodies from nuclear sub."
CNN (23 August 2000) "Putin expresses guilt over Kursk tragedy."
CNN (24 August 2000) "Putin to lay wreath at site of sunken submarine."
CNN (29 August 2000) "U.S. sonar tapes support Kursk torpedo theory."
CNN (8 September 2000).
CNN (9 September 2000) "Russia and U.S. agree 'friendly fire' did not sink Kursk."
CNN (7 November 2000).
CNN (9 November 2000) "Second note tells of fire."
CNN (21 November 2000) "Submarine SOS points to Kursk collision."
CNN (16 July 2001).
Dagens Nyheter (27 October 2000) A daily Swedish newspaper.
Detroit Free Press (24 August 2000).
Free Press News Services (27 October 2000).
Hart, Paul ´t (1993) "Symbols, Rituals and Power: The Lost Dimension of Crisis Management." *Journal of Contingencies and Crisis Management.* Vol. 1:1, 36–50.
Hasper, A. (1998) "The MV Estonia Catastrophe." In *Crisis and Internationalization: Eight Cases from a Cognitive-Institutional Perspective*, edited by Eric Stern and Fredrik Bynander. Stockholm: The Swedish Agency for Civil Emergency Planning.
"How it was" (17 May 2001) Information accessed 3 October 2001 at: http://kursk.strana.ru/print/990107747.html
Idås, Bård (15 August 2000) "'Spionblikk' på ubåtdrama" [Spying on the submarine drama] Information accessed 28 September 2001 at: http://tux1.aftenposten.no/nyheter/iriks/d156224.htm
Ivanov, Dimitry (7 August 2001) "Rubin, General Designer has his own version of the Kursk tragedy." Information accessed 3 October 2001 at: http://kursk.strana.ru/print/997171699.html
Izvestia (August 2000) A daily Russian newspaper.
Keeler, J.T.S. (1993) "Opening the Window for Reform: Mandates, Crises and Extraordinary Policy-Making." *Comparative Political Studies.* Vol 25: 4, 433–486.
Kingdon, John (1984) *Agendas, Alternatives and Public Policies.* Boston: Little Brown.

"Kursk raising operation to be the subject of an online press conference" (25 May 2001) Information accessed 3 October 2001 at: http://kursk.strana.ru/print/990780885.html

Lindgren, Karin (forthcoming) Leader-Driven Policy Change [Ledardriven policy förändring] The manus of a PhD thesis from the Department of Peace and Conflict Research at the University of Uppsala, Sweden.

Lundgren, B.R. (1998) "A Swedish Perspective on Crisis Management." *The Civil Aspects of Crisis Management: International Cooperation and Good Neighborly Relations* (September 29- October 2, 1997). Proceedings from the Partnership for Peace seminar in Stockholm. Stockholm: The Swedish Agency for Civil Emergency Planning.

Mishler, W. and R. Rose (1999) 'Five Years After the Fall: Trajectories of Support for Democracy in Post-Communist Europe.' In *Critical Citizens: Global Support for Democratic Governance,* edited by P. Norris. Oxford: Oxford University Press.

The Moscow Times (26 October 2001) "Three bodies retrieved from Kursk."

Moskovsky Komsomolets (August 2000) A daily Russian newspaper.

Mürk, P. and E. Rugam (1999) "An Analysis of Information Management in a Crisis: The Tragic Peacekeepers' Accident of 1997." In *Crisis Management in Estonia: Case Studies and Comparative Perspectives*, edited by Eric Stern and Dan Nohrstedt. Vol. 3. Stockholm. The Swedish Agency for Civil Emergency Planning.

Nezavisimaya Gazeta (August 2000) A daily Russian newspaper.

Nohrstedt, Daniel (2000) "Intuition and Avoidance in Foreign Policy Crises: How Decisionmakers Cope with Uncertainty." Masters thesis. Uppsala: Department of Peace and Conflict Research, Uppsala University.

"Norwegian experts set for site radiation checks" (19 September 2001 Information accessed 3 October 2001 at: http://kursk. strana.ru/print/1000892242.html

Nummelin, Wiktor (14 August 2000) "Russisk atomubåt med over 107 mann ligger på bunen av Barentshavet" [Russian submarine with over 107 men lies stranded in the Barents Sea]. Information accessed 28 October 2001 at: http://tux1.aftenposten.no/nyheter/uriks/d155945.htm

Nummelin, Wiktor (2 July 2001) "Uvisst om norske dykkere er på vei til Kursk" [Uncertainty about whether Norwegian divers are on their way to Kursk]. Information accessed 28 October 2001 at: http://tux1.aftenposten.no/nyheter/uriks/d219759.htm

Ramberg, Britta (forthcoming) "The European Commission's Management of the Earthquakes in Turkey: August and November 1999." A CRiSMART working report.

Rosenthal, U.; P. ´t Hart; and A. Kouzmin (1989) "The Bureau-Politics of Crisis Management." In *Public Administration Review.* Vol. 69, 211–233.

The Russia Journal (19 August 2000) "The media shows contempt for Putin."

The Russia Journal (2 September 2000) "Military reforms sinks along with the Kursk." Information accessed October 2001 at: www.russiajournal.com

Stern, Eric (1997) "Crisis and Learning: A Conceptual Balance Sheet." *Journal of Contingencies and Crisis Management.* Vol. 5:2, 69–86.

Stern, Eric (1999) *Crisis Decisionmaking: A Cognitive-Institutional Approach. (Stockholm Studies in Politics 66).* Dissertation. Stockholm: Department of Political Science, Stockholm University.

Stern Eric and Fredrik Bynander (Eds.) (forthcoming) *Crisis Management in Poland.* A CRiSMART working report.

Stern, Eric and Dan Hansén (Eds.) (2000) *Crisis Management in a Transitional Society: The Latvian Experience.* Vol. 12. Stockholm: Swedish National Defence College.

Stern, Eric and Dan Nohrstedt (Eds.) (1999/2001) *Crisis Management in Estonia: Case Studies and Comparative Perspectives.* Vol. 3. Stockholm: Swedish National Defence College.

Sundelius, Bengt; Eric Stern; and Fredrik Bynander (1997) *Krishantering på svenska: teori och praktik* [*Crisis Management the Swedish Way: In Theory and Practice*]. Stockholm: Nerenius & Santèrus förlag.

The Toronto Star (24 August 2000).

Tsvetkova, Roza (18 June 2001) "Igor Spassky: 'Out at sea, there will be no time for thinking.'" Information accessed 3 October 2001 at: http://kursk.strana.ru/print/992858689.html

Part III
A Comparative Analysis and Conclusions

Chapter 8
Transitional Crisis Management

Boris Porfiriev and Lina Svedin

The democratic transformations, which have occurred in Russia over the past 15 years, have dramatically changed the existing political regime including its institutional, legislative and economic pillars. The very process of this tremendous and painful transition involved critical challenges to the resilience of the nation's newly established and emerging political and administrative institutions, values and social norms. These challenges have also been associated with increased risks and crises in the vital societal and political domains.

The chapters of this volume particularly focused on human and environmental safety, public order and economic development issues, which are all critical for the survival of any political regime. The data (although not always exhaustive) in the chapters reveals how the established and emerging institutions of contemporary Russia handled specific crises in key areas. These findings provide the opportunity for testing the hypotheses and propositions presented in the introduction of this volume.

The applicability of these initial hypotheses and propositions to the Russian context would mean transforming them into theorems. The failure to find adequate proof or evidence to support these propositions should not lead the reader to believe that they are invalid. Rather they call for more comprehensive crisis research and consideration both in Russia and in other transitional polities.

From Hypotheses to Theorems: Propositions Revisited

THE INSTITUTIONAL EROSION HYPOTHESIS

Proposition 1: As transitional societies move from one crisis management regime to another the eroded institutional frameworks are extremely strained. Thus civil society and public institutions become increasing more vulnerable to unpredictable and negative events.

The data presented in this volume, in particular in the chapter about crisis policy in Russia, provides insight on the shift which occurred in the 1990s and in the new century in Russia. There was a shift from centralized crisis planning and crisis response to a more decentralized model. There was also a shift from a strong military orientation (focusing on wartime threats with the civil defense as an organic part of the Ministry of Defense) to peacetime planning with civic and quasi-civilian institutions prevailing on the crisis management scene.

This major change complies with the general trends in developing and established democracies, in particular in Europe (see Porfiriev, 2001b). However, this process in Russia was instigated by the instant collapse of the Soviet Union which resulted in a sudden reduction of territory and population. This abrupt change led to institutional erosion. The crises discussed in the media report (Chapter 3) show that the norms, rules and values which existed for decades in the former Soviet Union (in particular, industrial and ethnic relations) were abolished or lost their binding character. They were replaced by alternatives, which were alien to the public conscience, or were simply not replaced at all. This created societal friction, disharmony, frustration and marginalization. Throughout this volume it is mentioned that the new institutions of EMERCOM and especially USEPE still have a lot of work ahead of them in regard to developing an established and fully effective crisis management structure.

The case studies on the Chernobyl, Karabash and Neftegorsk disasters vividly demonstrate that there is a high degree of strain on the institutional framework, and particularly on those parts working directly with crisis management. For instance, Chernobyl occurred just when large-scale political and economic changes (perestroika) were taking place in the former Soviet Union. This coincidence had a considerably negative impact upon the direction and pace of economic development. Some Russian economists believe that the 1986 radiation disaster was one reason for the devastating economic slow down in the following decade. The disaster put additional strain on the federal institutions responsible for economic and social reforms.

In addition, the social security system in the former Soviet Union never considered, and thus was not prepared to deal with,

the problem of caring for thousands of disaster victims over several years. A system was established for numerous war veterans but not for people suffering from peacetime crises. There was no national legislation concerning social security and benefits for civilian victims. Compensation has been issued to the Chernobyl victims on an individual basis. Thousands of Chernobyl liquidators were disabled or had serious health problems as a result of the accident, and this put the inflexible institutional and legislative systems under great pressure. The federal governments of the collapsing Soviet Union and the emerging Russia Federation had to introduce new laws and regulations. Likewise, they had to establish new agencies to take over the responsibility of long-term socio-economic and medical aid for the affected rescue workers. In turn, thousands and thousands of rescue workers unsatisfied with the pace and amount of aid provided organized a movement to protect their vital interests, which added additional strain to the institutional framework.

The Karabash experience occurred after changes were made to the crisis regime. The plant's top management and the regional and local authorities were open to working with NGOs (like the Green movement and other environmental groups), which was not common during the old regime. Production continued which only aggravated the ecological crisis and little was done to improve the residents' socio-economical conditions and the city's dependency on the mono-industry. Political pressure from the NGOs resulted in the fact that the area was officially declared an ecological disaster. The old regime failed to consider crisis prevention and crisis management issues. Furthermore privatization put additional strains on economic development and crisis policy in Russia. This complicated the existing conflict between economic and environmental priorities.

The Neftegorsk earthquake quickly demonstrated the weakness of the USEPE (the new civil defense institutional framework), since the earthquake had wiped out the local response teams. Such vulnerability illustrates the need for good organizational coordination between neighboring and higher-level response units. Another institutional vulnerability revealed by the earthquake disaster was the issue of crisis communication. The crisis response was totally dependent upon a functioning telephone system, but the earthquake had cut the telephone lines. There was no back-up plan. The cut in the communication network had tragic consequences.

The remoteness of the region (i.e. an island) was also one more factor contributing to crisis vulnerability. A key problem was getting resources there once it had become apparent what had happened and the extent of the disaster. This problem existed since the old regime's model of centralized crisis response had not yet been transformed into the new USEPE framework. As a result, the response was delayed and had to be in part replaced by ad hoc solutions and voluntary initiatives. This initial volunteer response was performed mainly by the victims themselves and it was crucial in the first thirty-six hours before external help arrived.

The case analyses in this volume and the overview of the USEPE development (see Porfiriev, 2001a) support the claim that the new regime's crisis policy has been strained by excessive institutional burdens and a severe shortage of funds. It is evident in Russia that the regime shift from an old hierarchical and centralized crisis management system to a more decentralized one (which utilizes public, private and mixed initiatives) has been problematic in crisis management. However, the extent of this shift and the consequences it has on crisis development and crisis management depend largely upon the degree of institutional rigidity: the essence of our next hypothesis.

THE INSTITUTIONAL RIGIDITY HYPOTHESIS

Proposition 2: In transitional polities the persistence of long existing institutional structures and institutions (at the meso- and micro-levels in society and government) result in a resistance to change to the basic foundations of the macro-political and macro-economic levels. This precipitates crisis conditions and restricts the effectiveness of crisis policy. In addition, the policies and institutional practices of certain regional Western institutions (in particular, the EU and NATO) are likely to experience stress-inducing tension between domestic and Western norms and practices.

This hypothesis states that old institutional practices in transitional societies and government persist, particularly at the micro- and meso- levels, despite other changes. Proponents of the old regime in the crisis management structure, government or society at large can even make dramatic attempts to challenge or destabilize the new regime.

The Chernobyl liquidators' case gives perhaps the most convincing and comprehensive example of this. The struggle between the liquidators and the national government (Soviet government until 1991 and then the Russian government thereafter) challenged the institutional and judicial norms, and the processes and structures which were typical for the former Soviet crisis policy and had been transferred to the Russian Federation. The state system was unable to manage social security issues and this revealed that the legal system was powerless, or alternatively that the state could not implement its own policy. The state was inflexible, unable to coordinate operations, and plagued by bureaucratism.

The state employees and agencies survived the drastic changes in the political and economic spheres, and were simply transferred from the old regime to the new. This contributed to the persistence of rigidity in the administrative system as a whole. These organizations had never dealt with such issues. Unsurprisingly, the administrative system was indifferent and uninterested in the concerns raised by the Chernobyl rescue workers.

There was a clear conflict between the old bureaucratic structures and procedures, and the rescue workers' needs. The liquidators quickly understood that the Government was not interested in their concerns, so they organized special NGOs to fight for their right to social benefits. NGOs represent a new element in the emerging crisis management structure in Russia, because they are more geared towards a decentralized system. A number of actors (including private actors) played an important role in the struggle between the federal government (macro-level), the regional authorities (meso-level), and the individuals who were affected by Chernobyl disaster (micro- and meso-levels).

As for the second part of this proposition (concerning the tension between domestic and Western norms), none of the studies in this volume specifically addressed this issue. Thus, it needs further investigation. However, at the superficial level there are a few examples which support the proposition. Russia has some intentions of joining the EU as mentioned by the President of Russia in his meeting with the French President in St. Petersburg in early July 2001. EU membership would require conforming to certain principles. One such topic would be the death penalty issue, which is strongly forbidden according to EU political and humanitarian values. In

Russia, this issue raises an increasing and intensive debate among the federal authorities (the President, the Government and the Parliament), the public and clerical circles. Public opinion polls reveal that the Russian majority is in favor of the death penalty, and the National Criminal Code and Execution Practice is supported by a significant part of the State Duma and the Russian Orthodox Church. This is in sharp contrast with the position of the Russian President, who officially voiced his displeasure with the leaders of the State Duma in July 2001 in relation to this issue. The President is, however, supported by many of the Russian democratic movements and EU legislation which strictly prohibits this kind of punishment. This is just one example of the discrepancy between domestic opinions and Western norms and values. Other hot topics would be the human rights issue in Chechnya, industrial safety, and environmental standards.

THE UNDER-INSTITUTIONALIZATION HYPOTHESIS

Proposition 3: As transitional societies move towards a Western style democracy and market economy, there will be a struggle to overcome the existing under-institutionalization and there will be increased politicization and mediazation of crises and crisis policy.

This hypothesis assumes that the perception of a crisis becomes increasingly shaped by the media and thus becomes a political issue. It also implies that a more open media, real or imagined shifts in the crisis management regime, and the socio-economic situation could generate increased public expectations on the Government to manage crises better.

The case studies in the volume provide abundant proof of the increasing openness and coverage of crises and crisis management issues by the media in Russia, particularly when this is compared with the former Soviet Union. During the Soviet times the motto was, "No victims, no destruction." No details were provided about major natural or technological disasters in the official media and there were no independent information sources. Accidents at military sites and during military operations were almost never made public by Soviet politicians or the government media.

Contrary to that tradition, coverage of the sunken Kursk submarine bears witness to the fact that the new crisis regime is indeed

more receptive. It is now easier for the newspapers and TV stations to report on crises, including major disasters during strategic military missions. Five books and hundreds of newspaper articles were published in Russia within just one year after the Kursk tragedy. Chernobyl, which was one of the most publicized event during the Soviet era, does not even begin to compare. Nowadays, the media is an important source of the information since the Government and its respective agencies are still quite reluctant to give the public access to government documents. The back-side to the new critical media coverage in Russia is that, like in Western countries, journalists tend to fill in the blanks with whatever they feel fit. Thus, some of the reporting on crises has been quite rhetorical and sensationalized. This has increased the risk of the media becoming a crisis generator in itself (see Cherkashin, 2001: 36–44).

Some interesting observations in conjunction to the crisis politicization and mediatization hypothesis are the studies on the Neftegorsk earthquake and the Karabash ecological disaster. Pressing ecological situations and natural disasters were never seriously considered by the Soviet political regime. However, various actors have pushed these items further up on the political agenda. Most of these actors have been involved in promoting ecological awareness and in pointing out ecological threats (which are becoming recognized as crises).

The presence of NGOs and other private groups is a sign of the shift in crisis regime which is more receptive and open to the media and the public. In particular, other groups (other than the federal, state, regional or local governments) are growing in influence. The official media competes with the new independent information sources. At the same time, mounting politicization of everyday and crisis events (especially those associated with property redistribution and elections) increases the number of such sources, primarily at the local and regional levels. By being better informed, the public is empowered and can concretely claim certain demands from the authorities.

The media study revealed that the Russian media can put more pressure on the crisis decision-makers by critically reporting crises and crisis management. Whether the media actually succeeds in this aim is still unclear since little or no information was provided directly from the decision-makers. Nevertheless, media reports create

expectations among the public and thus the possibility of escalating the crisis.

The persistence of the Chernobyl liquidator problem has in part resulted from loopholes in the crisis recovery policy, but also in part by increased public scrutiny and participation. The victims and their families have been able to take their claims regarding social security and government compensation to court.[26] Issues like workmen's compensation for disasters can now be pursued through the legal system in the new regime.

This struggle has been a reaction to the state's failure to provide proper medical care for the Chernobyl victims who sacrificed their health for the country. The values of a caring government, solidarity and the notion of national heroes are values which were deeply entrenched in the old Soviet system. These values persist in many ways in contemporary Russia.

Despite the changes made over the past ten years after the dissolution of the Soviet Union, there is still need for improvement. Many sectors have in fact witnessed a dramatic decrease in the number of services available, as well in safety and security. The government at all levels must be able to cope better with crises in the future. The people in Karabash felt that they received less help from the Government than they had expected in response to their ecological concerns about the city mining production. There was an expectation that the city's dependency upon the mono-industry would be replaced or in some way minimized (i.e. the ownership of the plant and its future operations). When the Government showed that it was not in any direct way going to take responsibility for the current ecological state in and around the city nor intervene in the privatization process of the plant, the plant workers revolted.

In a sense, the objections of the plant workers and the local residents concerned the new goals and aims of the crisis management regime with newly identified problem areas and new processes for managing them. At the same time the plant workers and the local residents felt there was a lack of adequate problem solving. Their living conditions changed very little. The people of Karabash did not per-

[26] In part, of course, the persistence of the liquidator issue has to do with the real medical problems of those who were affected, especially the children. This is by no means a matter of lesser importance. On the contrary, these important issues and the failure of the system to provide adequate medical care to these people are at the very heart of the problem.

ceive the Government as taking its part of the responsibility. This case shows how the new regime has failed to be properly institutionalized. Some significant implementation issues are still unresolved, and this in part has led to the plant workers' protests and a second crisis.

THE INSTITUTIONAL OVERSTRAIN AND STALEMATE HYPOTHESIS

Proposition 4: Overstrained decision-making units in transitional societies increasingly experience institutional stalemate resulting in poor detection skills, delayed crisis prevention and ineffective crisis response. In turn this will contribute to the increase in the number and severity of crises. With mounting crisis politicization, crisis managers will tend to focus on acute crises rather than on creeping crises, and focus on short-term political and economic issues at the expense of long-term social and environmental concerns.

Even thought this hypothesis is presented in this volume, one could easily find evidence for it in previous CRiSMART publications. It may be that the Russian context provides some of the most convincing testimony to the proposition.

The increased complexity and severity of crises in Russia stem from the legacy of centralized planning and the excessive military budget in the former Soviet Union, as well as the problems associated with the transition from a totalitarian regime to a more democratic and market-oriented one. For instance, the poor construction of residential buildings in the late 1960s and early 1970s amplified the impact of the Neftegorsk disaster. The building codes and construction practices were clear products of centralized planning. Standardized construction practices were implemented with little or no regard to geographical variations or special circumstances.

The state industrial and construction companies could have minimized the impact of the Neftegorsk and Karabash disasters if they had not tried to economize on construction costs and occupational safety. This was very typical for the former Soviet political and economic establishment (see Porfiriev, 1998). In the Cold War era, huge funds were allocated to arms and to supporting allies, and this meant cutting corners in industrial, occupational and environmental safety which in turn simply created more favorable conditions for the bulk of the crises scrutinized in this volume. At the

same time, these conditions were aggravated by recurrent social and economic hardships and political disturbances. This added to the complexity and severity of specific crises and the management of them.

For instance, the rescue workers responding to the Neftegorsk earthquake and the Kursk accident had little success because of the shortage or total lack of rescue equipment and special units. EMERCOM and the Defense Ministry had scarce funds for these types of operations. In turn, the shortage of funding led to a deficit in the federal budget, which was hit hard by the deep economic recession in the 1990s.

In 1995 when the Neftegorsk earthquake occurred, EMERCOM had to respond to more than 1,500 emergencies which all required resources. In 2000 when the Kursk sunk, the Defense Ministry had to share its scarce resources with a number of other less serious military accidents and routine operations. Almost at the same time as the Kursk disaster, EMERCOM and a few other ministries were coping with a terrorist attack and a major fire at the TV tower in Moscow.

The combination of external circumstances and internal overload significantly complicated the crisis management in these cases. This combination strained the existing institutional framework and USEPE, in particular, was put into a deadlock position. Consequently, this key national system for the prevention of and response to natural and technological disasters was forced to focus on already active crises rather than trying to anticipate and prevent potential crises. Some of the crises failed to be detected early or were detected too late, and thus the crisis response was often significantly delayed. In the Neftegorsk case, a poor communication network and the remoteness of the area exacerbated the situation and resulted in a major delay in the crisis response.

This has had two adverse implications for the national crisis policy. First of all, crisis prevention and mitigation capacity have been reduced. Once hit by a crisis, crisis management systems are often injured and need time to heal. Thus in the short-term, there is a higher risk for crisis recurrence and an increase in vulnerability. Chapter 2 (the summary on the legislative and institutional framework in Russian crisis policy) and Chapter 4 (the Neftegorsk case study) provide concrete statistical data to support these claims.

The second consequence of the excessive strain upon the crisis institutional framework has been the concentration on short-term social and economic issues rather than on long-term social and environmental concerns which often develop into creeping crises. One can also compare the relative strength of the emergency management policy with the national environmental policy, which is relatively weak. In the 1990s the federal body responsible for environmental issues was diminished from a ministry to a committee (agency), and then in 2000 it was pushed under the Federal Ministry of Natural Resources. Clearly the emphasis on Russia's environmental policy is on resource development rather than on the prevention of excessive exploitation and on conservation.

THE BUREAU-POLITICS HYPOTHESIS

Proposition 5: Transitional polities are likely to experience a high frequency and a high intensity of bureaucratic political behavior in 'normal' and crisis situations.

This volume does not consider any financial crises, which, perhaps, present the best laboratory for testing this hypothesis (as the Estonian volume illustrated). However, the data available in the Russian case studies more or less supports the notion of a close relationship between crises and bureau-organizational politics.

For instance, the media coverage of the Kursk accident clearly revealed the ambiguity between the various actors concerning the crisis response and the crisis communication. The public was given a number of different and conflicting explanations for the submarine accident. Similar discrepancies appeared regarding the possibilities for rescuing the Kursk crew alive (for details see Cherkashin, 2001). In part this discrepancy evolved from the uncertainty surrounding the accident and the diversity of the units involved in the military exercise and in the rescue operation. Only to a certain extent does it reflect underlying intra-governmental and intra-organizational tensions. The key crisis decisions were taken ad hoc under hectic conditions which provided plenty of room for bureaucratic maneuvering by specific actors. This added a second dimension factor to the already problematic crisis communication and simply exacerbated the crisis in the eyes of the public, both in Russia and internationally.

A crucial question at this point is to what extent the transitional state of Russia contributed to bureau-organizational and bureau-political behavior of the actors in responding to a particular crisis. Bureaucratic maneuvering was quite typical in the former Soviet Union and is no less characteristic in other established democracies. Responsible officials or institutions try to shift responsibility to other crisis actors, primarily to journalists or political opponents. Organizational and political behavior, in terms of blaming and seeking scapegoats, is common for hierarchical institutional and social systems.

We believe that at least two factors are present during the transitional process and should be highlighted as conducive to bureaucratic politics. One of these involves the major political change with a new president taking the wheel. S/he is surrounded by a mix of new people and part of the old team from the previous administration, who use different principles and methods for crisis communication. This affects the type and rate of crisis decision-making especially when communication between the crisis actors, the media and public is already problematic. This is further complicated by the international community's involvement in crisis management. Psychological pressure and organizational innovations can contribute to routine bureau-political maneuvering.

The second factor is associated with the changing degree of openness in the new regime and the mediatization of crisis policy. The intensity of the new independent information sources (seeking more transparency in official crisis reports) has sometimes forced responsible officials and institutions to think about creating a safe way out.

As the Chernobyl liquidator case shows such organizational behavior does not only occur in crises but in post-crisis 'normal' conditions as well. Bureaucratic tricks were used to postpone or even deny the official recognition of the liquidators' recruitment for rescue services in the disaster area. Another ploy of the federal government was to deny responsibility for social security and benefits to the Chernobyl rescue workers and their families. The federal government also tried to shift this responsibility to the lower-level authorities and to the NGOs.

Likewise, the media survey discloses a number of examples of sophisticated bureau-organizational maneuvering concerning prop-

erty redistribution. The survey revealed that the existing political-administrative system is relatively soft and can frequently change the divisions of labor, routines, and practices for interagency coordination. On the other hand, the survey's discussion on the bureau-political issues of property redistribution in Russia confirms that the "new group syndrome" operates at the policy regime level where conflicts easily escalate into power struggles. This is a strong characteristic for a transitional polity.

OVERLEARNING AND REFLEXIVE INSTITUTIONAL CHANGE HYPOTHESES

Hypothesis 6: Transitional societies in crisis conditions tend towards reflexive institutional change and institutional volatility.

Hypothesis 7: In transitional (as opposed to established) democracies there is a high risk that crises will generate so-called 'double loop' and/or 'third order' learning but there is even a greater risk for overlearning.

In contrast with the earlier formulated proposition, these two receive little or no support in this volume. Russia has more in common in this regard with Latvia than Estonia (see Stern and Hansen, 2000).

The overview of emergency management policy in Russia and the Chernobyl liquidator case illustrates that institutional changes are occurring in the national crisis policy. EMERCOM's development and the notable changes in its structure and functions as a state agency over the past decade are evidence of this. To a great extent these transformations were built on past experiences and the lessons learned from them. For instance, in 1991–1993 the Head of EMERCOM was ordered to step to in and manage the conflict in Northern Ossetia and Ingushetia although this has never been the function or the intention of EMERCOM. Another example of institutional change is when the independent national agency on hydrometeorological service was incorporated into EMERCOM but then shortly thereafter separated from it.

In addition, the media survey and, to a lesser extent, the Karabash ecological disaster study disclose even more dramatic variations in the institutional framework for the economic development policy. The rapid and controversial swing to the market econ-

omy precipitated the emergence of multiple new structures, e.g. the Ministry of Taxes and Fees, the tax authorities, the Federal Anti-Monopoly Commission, and a commission for bankruptcy issues. At the same time, this swing facilitated the re-establishment of NGOs (like labor and strike committees and the creation of new organizations like the Green movement).

These experiences reveal that such transformations can be interpreted as reflexive changes rather than restructuring as seen in Estonia or Poland. For instance, between 1994 and 2000 EMERCOM underwent significant but incremental reorganization. This followed a shift in disaster policy from emergency response in the early 1990s, to emergency preparedness and more comprehensive response in the mid 1990s, to a disaster mitigation and risk reduction policy in the late 1990s into the early part of 2000. The same process has occurred at the Interior Ministry, which has coped with the sharp increase in organized crime by creating special task forces (*spetsnaz*). In this ministry such changes have been more frequent than in EMERCOM, which has been more affected by changes in the top management rather than changes in the crime rate alone.

We believe that institutional volatility actually exists and is important, but at least in the Russia's context we can not attribute it to the transitional process. The decision-making framework is more significant since it is shaped by specific historical developments and the specific culture (including political culture) of the polity. Although modern Russia is no longer a totalitarian and authoritarian society, the political system has preserved its strong hierarchical structure with the concentration of power in the hands of the top authorities. This creates conditions for relatively easy structural and functional changes, and the replacement of the top management in any specific ministry or state organization. This is even more so in federal crisis policy, which according to the Russian Constitution and other federal laws is the exclusive prerogative of the President. If s/he favors such changes and replacements (as was the case was with the first Russian President), they will implemented and this will make institutional volatility more organic and persistent.

Reflexive institutional change during or after crises is not evident in Russia. Likewise, signs of overlearning do not seem to be present. Considering the findings in the case studies in this volume, one could claim that there is more under-learning. This means that

few, if any, lessons are drawn from earlier crises. The Neftegorsk earthquake and the Karabash ecological disaster exemplify this. This also means that no superficial changes are made in the institutional framework, at least not within the country's crisis policy.

The Chernobyl liquidator case most vividly illustrates this point. The inadequacy of the government institutions to provide social services to thousands of rescue workers after the radiation disaster transformed into a creeping crisis. The governmental bodies were indifferent, so the liquidators organized NGOs to fight for their interests. Victims of submarine accidents had similar experiences. Due to the authorities' lack of concern, the relatives set up special committees and clubs to help their cause. Some notable changes were observed after the Kursk tragedy. In September 2000 the new President of Russia declared a special aid program for the victims' relatives. This was important from the viewpoint of social security since relatively large compensations were granted. It provided legitimate status for the victims, and the Government accepted formal responsibility for its part in the tragedy. However, this step did not make the situation less controversial.

Recent experiences in recovering from the devastating floods in Yakutia and the 2001 terrorist attacks in the USA reveal that the public has in many ways learned much more about how to deal with a crisis than the governmental institutions have. Contrary to the hypothesis that in transitional polities governments have not had enough time or experience to become entrenched in their political and bureaucratic positions, the Russian actors more or less retained their old positions, but they were not open to critically evaluating their practices or the institutional arrangement. This serves as one more argument that in risk societies established historical, cultural and social core factors determine the pace of post-crisis reflexive change and learning from crises more so than the actual process of transition.

Conclusion: Transitional Vulnerability, Crisis Development and Crisis Management[27]

Based on the results of the on-going research (not only in Russia but also in many of the other new democracies), it is possible to identify a number of common characteristics for transitional countries regarding the frequency and severity of national and transnational crises. The most important political, institutional, and socio-cultural elements in such countries are unstable. Institutionalization, the shadow of authoritarianism, discrepancies and conflicts between public values and norms, intra- and intercommunity strain (including ethnic tensions), and the changing role of the media are all significant factors. Likewise, economic problems result in spending cuts and infrastructural decay.

SOCIO-CULTURAL AND POLITICO-INSTITUTIONAL CHANGE

All transitional societies by definition are evolving from state socialism towards various forms of liberal democratic states and societies. Some of these polities include the Baltic countries (Estonia, Latvia and Lithuania) which have made a transition from Soviet occupation to the restoration of national sovereignty as independent states. These profound socio-political changes pose great challenges to the new democracies.

First, the public values and norms rooted in the societies of the former Soviet Union republics were depreciated or replaced by new ones. There was a shift from a totalitarian and authoritarian state to a deregulated and liberal (people-oriented) public policy. This provided for more local control and individual freedoms including private property, entrepreneurship and social movements. These values were almost immediately accepted by the younger generations who had fewer attachments to the old political regime. However, these radical changes came into conflict with those which had given priority to public and collective interests over individual rights/preferences. These preferences dominated before and are still deeply en-

[27] This section builds and expands upon the concluding chapter in Stern and Hansén (2000), and the constructive comments of Paul t'Hart.

trenched in the mass consciousness of the older generations. Just two decades ago they lived absolutely different lives; they have lost their social orientation and find themselves now in an unfamiliar social and political environment.

Secondly, the old institutions and regulatory arrangements have been discarded or incorporated into a radically changed political and institutional context. The de-legitimization of the old regime in many cases has been so profound that large areas of legislation and legal practice have been completely scrapped. The "laissez-faire zeitgeist" plan-based authoritarian structures have not been promptly replaced with regulatory bodies common in the West. These bodies typically moderate and mitigate market failures of various kinds. The highly segmented and uneven process of legal and political reform has created politico-economic instability (Stern and Hansén, 2000: 348).

IMPLICATIONS FOR CRISIS DEVELOPMENT: THE IMPACT OF ETHNIC TENSIONS

Transitional processes involve social norms and value conflicts, legislation and institutional gaps, and imbalances; all of which have paramount implications for crisis management and crisis policy. In terms of crisis development, these have often created a fertile environment for the incubation of new crises or have stimulated dormant creeping or slow-burning crises.

The banking crises in Latvia and Estonia, property redistribution in various industries, and issues regarding social security and benefits for rescue workers in Russia exemplify this. Similarly, redefining the criteria for citizenship (which affected primarily Russian communities abroad) in conjunction to the national restoration of Latvia and Estonia became the source of many ethnic conflicts and attracted a lot of domestic and international attention.

High levels of ethnic tension, which separate majority and minority groups, are a striking feature of many transitional polities. Dramatic relocation initiatives during the Soviet era largely contributed to these ethnic tensions and still remains a thorny issue in many post-Soviet countries. The changing social, economic and political status of these ethnic groups poses major challenges in many transitional states. Certain national identities were strongly de-em-

phasized during the Soviet era but have been embraced by the newly independent former Soviet republics. In some of these countries (e.g. in Latvia), the status of Russian minorities has been placed in doubt.

At the same time, questionable federal legislation within Russia promotes the struggle of various entities in obtaining a larger piece of sovereignty. Hence, the political and economic shifts in the 1990s increased ethnic tensions. This has been the case in the Caucasus region of Russia. Ethnic tensions developed in 1999 between the Karachais and the Circassians during regional elections. A political confrontation developed and there was a high risk of the republic splitting up. Another example of ethnic tension was the dispute between Ingushetia and Northern Ossetia in 1991which escalated into an armed conflict. As for the regional war in Chechnya, the rebel leaders consider it to be an interethnic war for independence. However its deep historical roots have actually very little to do with the ethnic factor but rather is associated with the confrontation between political and economic groups (including several criminal elements).

RESOURCE SCARCITY AND INFRASTRUCTURAL DECAY AS CRISIS FACTORS AND CRISIS MANAGEMENT CONSTRAINTS

The socio-cultural and socio-political transformations in the transition to a more democratic society are exacerbated by resource constraints and infrastructural decay. These produce crisis conditions and reduce the crisis mitigation potential of transitional polities.

Urbanization is placing increasing demands on the infrastructure of large cities while at the same time the infrastructure is aging and is in desperate need of major investment. This is a global trend and holds true irrespective of the level of industrialization or democratization in any given country. Examples are the blackouts in Auckland, New Zealand; in Buenos Aires, Argentina; and in the Primorski region in the Far East of Russia. However in many of the new democracies, this problem is particularly acute. The former Soviet practices in construction and urban planning often failed to meet the modern standards for safety and performance. The Neftegorsk earthquake disaster is testimony of this. Furthermore, the infrastruc-

tural inter-dependency of the former Soviet Union has complicated this problem. In many of the Soviet republics, the infrastructure was developed as part of the larger Soviet bloc. For example, Estonia shares common water and electric infrastructures with Russia, which has led to many conflicts (Raudhein, 2000).

To make matters worse, such structures have not been properly maintained. This is largely because of the shortage of funds. Many of the new democracies are handicapped by a severe shortage of financial resources. Political and especially economic resources are stretched thinly. Given these limitations, potentially avoidable crises occur since investments in preventative measures have been reduced. Resource scarcity was certainly a contributing factor in the Karabash ecological disaster and the Chernobyl liquidator dispute. Deficiencies in preparedness are often revealed after crises occur. They may be hard to remedy on an ad hoc basis when there is already so little slack in the system (cf. Cyert and March, 1963; Levinthal and March, 1981; Meyer, 1982).

IMPLICATIONS FOR CRISIS MANAGEMENT: AUTHORITARIAN REFLEX

Socio-cultural and political tensions and resource constraints come to the fore during a transition process. Security and safety policies are weakened and thus the institutional framework, standards and work performance suffer. This lowers the effectiveness of preventative measures and the response to crises which were otherwise dealt with in a timely and appropriate manner by the old regime (for example, natural disasters and technological accidents). In general, crisis management is plagued by the persistence of the authoritarian reflex. Crises often call for quick and authoritative decisions and strong leadership which compete with democratic values such as openness, transparency, and participation in the political process. A certain degree of authoritarian action can be observed in crisis conditions in many established democracies; for example, declaring a state of emergency curtails citizens' individual rights and concentrates power in the hands of crisis managers.

New democracies have only recently succeeded in redistributing political power in a more democratic fashion and in securing civil and political rights. In emergencies, the authorities in these new

democracies are more skeptical about relinquishing those rights. Consequently, political and bureaucratic actors are more likely to resort to top-down methods within the existing hierarchical and centralized systems during a crisis (Hart, Rosenthal and Kouzmin, 1993).

In this context, it is interesting to note the presence of martial law (one of the most tangible and vivid authoritarian reflexes used during a crisis situation). However the absence of martial law did not eliminate the use of counter-terrorist measures during the regional wars in Chechnya. It did, however, provide a basis for considering this as a crisis condition, which facilitated the excessive use of authoritative measures with serious violations to human rights. Yet at the same time, draconian methods for dealing with terrorism in France or Great Britain have largely been accepted as appropriate and legitimate.

THE CHANGING ROLE OF THE MEDIA IN CRISIS MANAGEMENT

In many Western countries, the past few decades have been characterized by a qualitatively significant increase in the vigilance and power of the media within the political sphere (Blumer and Gurevitch, 1995; Edelman, 1988). Whereas the politicians in the former state-controlled socialist countries could count on a docile and supportive media, public servants in the new democracies are increasingly confronted with an aggressive, commercially-oriented, and critical media, which takes its 'watchdog' role very seriously.

Strategies (such as covering up mistakes), which might have been extremely effective in the old regime, have the potential to backfire dramatically if journalists manage to get wind of the embarrassing information. For example, the officials first reported the Chernobyl radiation disaster three days after the fact and there were multiple efforts to cover up or restrict public access to the data on the rescue workers' health. Likewise, some of the Russian officials tried to delay or twist the facts in the early reports about the Kursk tragedy. Similarly, one can recollect numerous analogies in Great Britain, Japan and USA concerning major accidents at nuclear power plants, and in Germany and Italy concerning chemical accidents. And recently there was an accident involving a Japanese passenger

vessel which crashed and sunk. Often cover-ups and delays greatly damage the legitimacy of the involved officials and often escalate the event from a local incident to a national crisis.

The cases discussed in the Estonian, Latvian and Russian volumes reveal that despite the fact that mediatization is much more prevalent in transitional societies than in more established democracies, this trend has increasingly forced many officials and decision-makers to demonstrate a greater awareness of the contemporary media game. As a result, officials and decision-makers tend to use a more open and proactive communication strategy and more rigorous accountability measures. However, sometimes sophisticated tools of media manipulation (e.g. purchasing of newspaper companies) have been used to diminish the media's power.

However there is one positive impact of the old regime which should not be overlooked. Institutional rigidity in certain respects can just as well be interpreted as healthy conservatism. Ironically some of the old authoritarian measures, which were implemented at the expense of individual democracy, actually may have helped to avoid some devastating crises. For example, tough measures against airplane hijackings were introduced during the Soviet era by special anti-terrorist task forces which are still active today in Russia. These measures have often been called undemocratic and excessive; however, the tragic events on September 11, 2001, in the USA could have possibly been prevented by such "undemocratic" measures. Sometimes tough measures and tight control are necessary for new and established democracies.

In short, the findings on transitional crisis management in this volume mesh theory and practice and are important in two significant ways. Researchers have a good foundation for studying real time crises and crisis management in transitional polities. At the same time, practitioners can keep crisis management policy in pace with national development and world trends.

References

Blumer, J. and Gurevitch, M. (1995). The Crisis of Public Communication. London, Routledge.

Cherkasin, N. (2001). *Unesenniye Bezdnoi. Gibel 'Kurska': Khronika, Versii, Sud'bi.* (Gone Abyss. The Death of Kursk: Chronicles, Accounts, Fate). Moscow: Sovershenno Secretno.

Cyert, R. and March, J. 1963. A Behavioral Theory of the Firm. Englewood Cliffs, N.J., Prentice-Hall.

Hart, P. 't, Rosenthal, U. and Kouzmin, A. (1993). Crisis Decision-Making: The Centralization Thesis Revisited, *Administration and Society*, Vol. 25, No 1, pp. 12–45.

Edelman, M. (1988). *Constructing the Political Spectacle.* Chicago, Chicago University Press.

Porfiriev, B. (2001a). Emergency Management Policy in Russia: Institutional and Legislative Issues, *Journal of Hazardous Materials*, 2001. Copyright " Elsevier Science Publishers

Porfiriev, B. (2001b). Managing Security and Safety Risks in the Baltic Sea Region: A Comparative Study of Crisis Policy Institutional Models. *Risk Management*, Vol. 3, No 4, pp. 51–62. Copyright " Perpetuity Press

Ragozin, A. (1999). Obschiye Polozheniya Otsenki I Upravleniya Prorodnim Riskom. (Fundamentals of Natural Risk Assessment and Management). *Geoecologia, Ingenernaia Geologia, Gidrogeologia, Geocriologia*, No 5, pp. 417–429.

Stern, E. and Hansen, D. (Eds.) (2000). *Crisis Management in a Transitional Society: The Latvian Experience.* CRiSMART Series, Vol. 12. Stockholm: ÖCB [The Swedish Agency for Civil Emergency Planning].

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